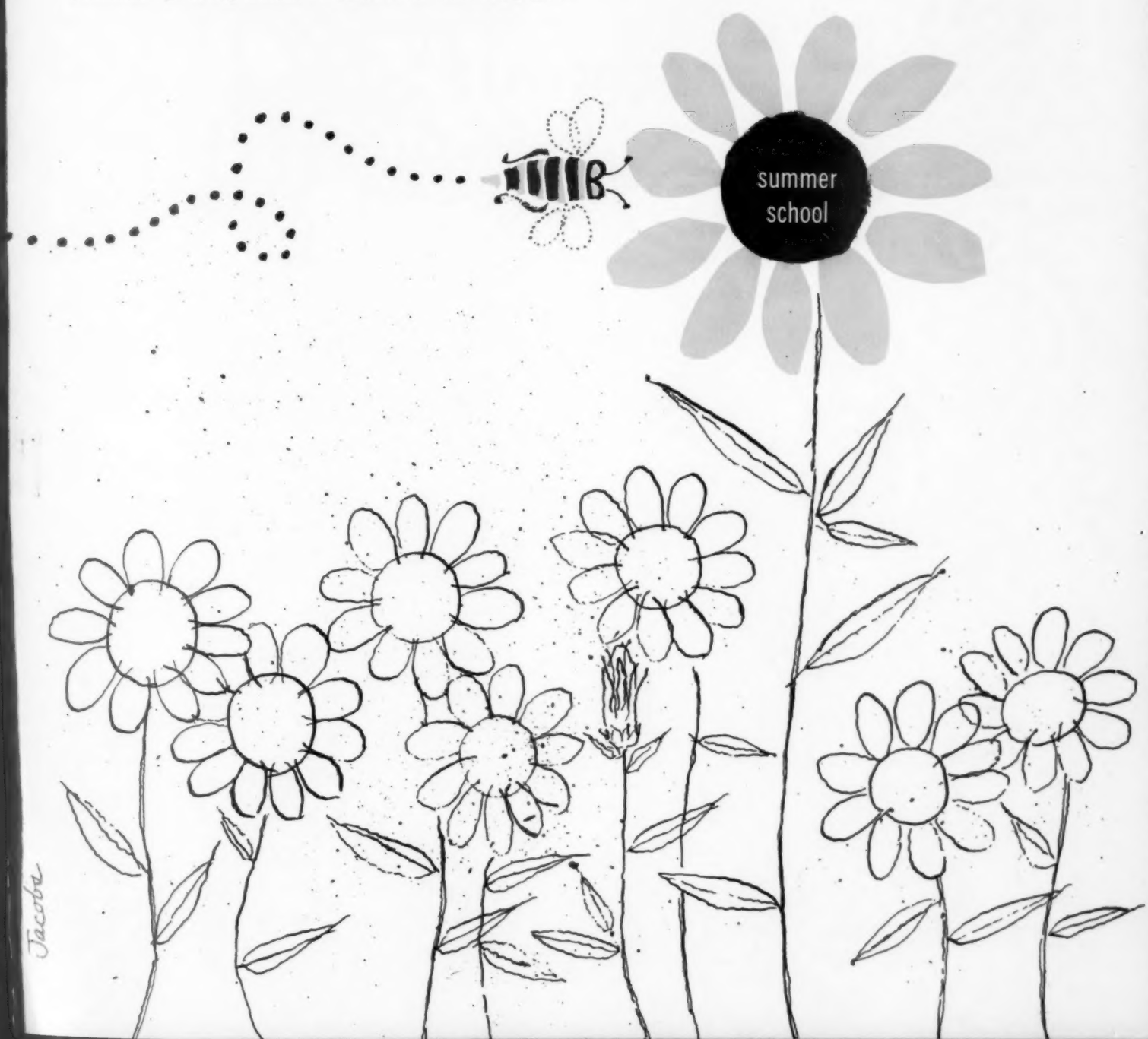
APRIL • 1959

AUDIOVISUAL INSTRUCTION

Published by the department of audiovisual instruction, NEA



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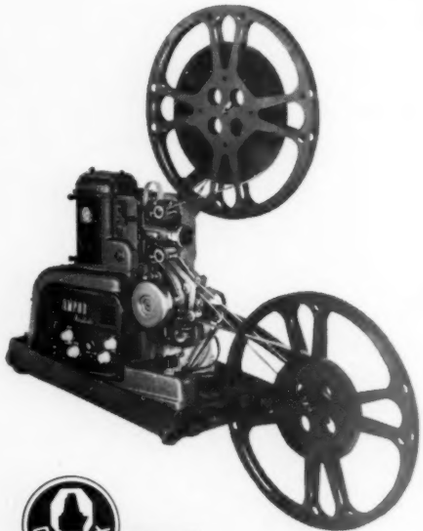

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VOLUME 4 NO. 4 | APRIL 1959

"... to help improve instruction through the more effective use of materials."

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AUDIO - VISUAL INSTRUCTION is published monthly except July and August by the Department of Audio-Visual Instruction of the National Education Association of the United States, 1201 16th Street, N. W., Washington 6, D. C. AUDIO-VISUAL INSTRUCTION goes to all members of the Department; membership dues including AUDIO-VISUAL INSTRUCTION, $5 ($2 of which goes to AUDIO-VISUAL INSTRUCTION); Single copies of AUDIO-VISUAL INSTRUCTION, 50 cents, annual subscription, $4. Second class postage paid at Washington, D. C.
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the EDITOR'S notebook

Shadowphobia Reconsidered

AMONG several comments inspired by our editorial on shadowphobia in the February issue is the following from W. H. Durr, supervisor of the bureau of teaching materials, Richmond (Virginia) public schools.

Dear Dr. Hyer: I have just finished reading with a great deal of interest your editorial. . . . Your assertion that we need to get out of the rut of thinking of the adaptation of new media to traditional practices and think rather in terms of the practices implied by the new media is well taken and realistic.

However, there is one point in your editorial that bothers me; that is where you say: "Specifically we could substitute for the concept of class size (25 students per class) the concept of ratio (one teacher for each 25 students)." I follow your line of reasoning here, which was developed further in the next paragraph, and I accept in part the validity of your premise. However I question your further assumption that "this could conceivably make it easier to increase teaching staffs." It seems to me that "ease" of increasing teaching staffs is *dependent on supply* and not on change of viewpoint as to staff utilization. Could it be that the use of the "hallowed" number "25" in either relationship is a carry-over of thinking based on tradition? Is it possible that new media have made "25" a meaningless carry-over from the past? I believe that the basic implications of your editorial give an affirmative answer to this question. —W. H. DURR

Miss Hyer Replies

Dear Mr. Durr: You are right in saying that ease of increasing teaching staffs is dependent on teacher supply. Perhaps rather than saying "this could conceivably make it easier to increase teaching staffs," I should have said: "This could conceivably make it easier to reduce the ratio of students to teacher."

Briefly, this is my reason for making this statement.

In view of the tools now available to the teacher, we can no longer justify the 25-pupil class size concept for the "information-dissemination" aspects of teaching. We need to build public understanding of the fact that information dissemination is only one (and a rather minor one at that) of the duties of a teacher. Far more important and more time consuming is the teacher's role as a "supervisor"—a guide for learners. I am thinking of such tasks of the teacher as that of learner motivation, improving human relations, arranging favorable classroom environment, studying individual learners, evaluating progress, and the like. For these kinds of tasks, 25 students per teacher is probably entirely too high a ratio.

I heard a geologist last summer state that we have far too few supervisors in the schools. He said that in his profession about one experienced geologist supervised only about eight less experienced, but still professional, geologist. Look around you in business and industry. How many foremen, supervisors, or floorwalkers have as many as 25 workers under their supervision?

As a further illustration, let me quote from *Planning Elementary School Buildings* by Engelhardt, Engelhardt, and Leggett: "There is also a limit as to the number of staff members that a principal can know intimately and work with effectively. If the principal is to guide the planning of teachers and parents, facilitate coordination among various aspects of school programs . . . and carry those other responsibilities necessary for maintaining an harmonious working group, the staff should probably not exceed 15."

Remember that in all of these illustrations adults are working with other adults who are more or less trained for the work they are doing. It should be relatively easy to educate the public to the fact that the work of the teacher is more difficult than that of the supervisors cited above. His supervisory task is only one function which he must execute successfully along with many others, and this task is further complicated by the fact that those to be supervised are immature and not skilled in the areas in which they must perform.

I say it should be "relatively easier," but will it? People complain that our schools cost too much when the cost of caring for a child in a public school under a trained teacher, in a planned program of learning is 33 cents an hour including buildings, supplies, equipment, teacher salaries, and all other costs (24 cents excluding interest and capital outlay). In comparison, an untrained teenage baby sitter with limited activities and no program costs 50 cents an hour and you provide the furniture, TV, telephone, transportation, and food. —ANNA L. HYER

Hand-Held Projector A Reality

Those of you who date back to the DAVI days when John Carroll used to entertain us at conventions with his stories of the hand-held projector will be interested in information recently passed along to me by Don White of NAVA. *There is* a hand-held projector known as the Mighty Mite! The 1959 model which projects filmstrips and slides can be purchased for $24.95 from Mitchell Art Productions, P. O. Box 25005, West Los Angeles 25, California.

Don White in his covering note to me went on to say: "It would be a wonderful thing for audiovisual conferences where we never seem to have the necessary extension cords, tables, and other accessories . . ." A.L.H.

International Issue

DAVI and the audiovisual field in general have numerous links abroad; more so perhaps than most people realize. Next month AVI will attempt a roundup of American pursuits overseas, exchange activities, and problems encountered by educators in other countries as they also become increasingly involved in the school audiovisual movement. Among contributors will be NEA's Dr. Carr; UNESCO's Henry R. Cassirer; France's Robert LeFranc; and DAVI's Clarence Bergeson who writes on last summer's visit to Russia.

Andrea Lynne

to Mr. and Mrs. Alec J. Hedquist
(nee Kitty Welch)
March 2, 1959, 2 p.m.
7 lb, 4 oz

Photo Credits, page 135

Bob Snider Reports • • •

INSTRUCTIONAL MOTION PICTURES were a major part of the opening session at the 91st annual meeting of the American Association of School Administrators in Atlantic City where nearly 20,000 superintendents and others concerned with education met from February 14 to 18.

The first general session featured "A Dramatic Cinema Presentation—Creativity in Education Through the Graphic Arts" compiled by the Walt Disney Studios for this meeting and presented by Carl Nater, director of the Disney Educational Film Division. Mr. Nater's discussion of the film as an instructional medium included excerpts from a number of Disney productions including *How to Catch A Cold, The Living Desert,* and *Man in Flight.*

Although space does not permit a detailed report of this huge convention, DAVI members will be interested in some of the many group sessions held in Atlantic City. One such meeting, "Results of Experiments With Closed-Circuit Educational Television," included papers by C. R. Carpenter of Pennsylvania State University and Laurance Siegel of Miami University. At this session, Alvin Eurich of the Fund for the Advancement of Education told the group that in about two months his organization will publish a summary of television research.

Other group session topics included "Effective Means of Using the Cinema in Teaching Literature," "Automation's Implications for Education," and "The Use of Educational Television in Two City School Systems (Philadelphia and St. Louis)."

Beginning in 1964, all new members of the AASA must submit evidence of successful completion of two years of graduate study in approved university programs designed to prepare school administrators. This new membership requirement is the result of a constitutional amendment passed at this convention.

• • •

As a member of DAVI you will soon receive your copy of *The Cooperative Approach to Audio-Visual Programs,* published jointly by DAVI and the NEA Department of Rural Education.

This publication by Horace C. Hartsell and Henry R. McCarty reports on a research project of DAVI's Committee on County-Cooperative Programs. Additional copies are available from DAVI at $1.50 with discounts on quantity orders.

Predicated on the fact that "most teachers do not have access to adequate instructional materials and services from local sources," this report presents an accurate picture of cooperative efforts among schools to overcome this deficiency. Its publication at this time tends to reinforce the National Defense Education Act of 1958 in its recognition of the nationwide need for greater and more effective use of audiovisual materials.

• • •

Your assistant executive secretary is serving as a consultant to the National Project in Agricultural Communications in the development of a visual communication training program.

When completed early in 1960 this program will be presented as an intensive two- or three-week course to state agricultural extension leaders in several sections of the country who in turn will instruct large numbers of county and local extension workers in effective visual communication.

The NPAC has already completed a number of "Train the Trainer" courses dealing with general, written, and oral communication. Among DAVI members taking part in a planning conference in Detroit February 6-8 were C. R. Carpenter, A. A. Lumsdaine, Seerley Reid, Warren Stevens, and Paul Wendt. —R.C.S.

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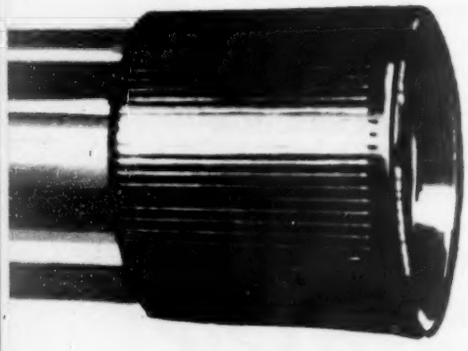
checking optical performance of projectors

FRANKLIN T. MATHEWSON



IT IS DISTINCTLY to the advantage of the audiovisual director to have some objective performance bases for selecting equipment and for checking the performance of old and newly delivered equipment. Objective performance bases can support the selection of one manufacturer's model over another, the rejection of new equipment, or the decision to replace or repair old projectors.

Only optical performance will be considered in this article although other factors are also important in selecting equipment. These others include audio and mechanical performance, ease of adjustment, lubrication and repair, service costs over a period of years, and the quality of service available. Consideration should also be given to the equipment models already in the school with which the teachers are familiar.

The four main factors of optical performance to be checked are:

- Intensity—or amount of light
- Resolution—or sharpness of focus
- Temperature of projected materials
- Quality—or color of light

The intensity of light from two projectors can roughly be compared by projecting them side by side onto a uniform surface such as a large projection screen or a wall area painted flat white. The same focal length lens should be used and identical projection area covered when sharply focused, even though one of the projectors may need to be moved forward or backward. We think of our usual alternating current as 110 volts, but the actual voltage delivered to an outlet may differ considerably from time to time due to a varying load in the area, and even from outlet to outlet at the same time due to longer lines, a variation in the size of wires carrying the electricity, and the load on the particular circuit.

Another variable to be checked in comparing the intensity of illumination of two projectors is the type of bulb used. Not only should the wattage be the same but *also the rated voltage*. Projection bulbs are commonly rated at either 105, 110, 115, or 120 volts and the lower voltage lamps will usually give off more light but have a shorter life if operated at a voltage above the rated value. Ten-hour lamps should not be

As implementation of the National Defense Education Act gains momentum, many requests for help in the selection of good equipment are coming into the national office. We think this artcle will be of assistance in checking one phase of this standard piece of equipment. AVI hopes to print future articles by the same author on simple tests for audio and mechanical performance of the projector. Dr. Mathewson is supervisor of instructional materials for the White Plains public schools, White Plains, New York, and chairman of the DAVI Committee on Equipment Standards. He invites communication from readers who have experimented with testing techniques.

matched against 25-hour lamps. Lamps should also be interchanged. New projection lamps should be used as the deposits on the inside of older ones cut down the illumination. It is also advisable to make sure that the plane of the filaments of the lamps are perpendicular to the axis of projection, and centered, as the insertion of lamps will sometimes twist the base holding the lamp.

The quality or color of light can easily be compared when operating two projectors side by side simultaneously. Some will appear nearly white, some bluish, some cream white. Others give an undesirable "rainbow" effect due to a poor optical system and chromatic aberration. The latter is more common in micro-projectors and older standard slide projectors—sometimes with the condenser systems out of adjustment.

Objective Determination of Intensity

A more objective determination of projector light intensity can be made with an ordinary photographic light meter. With a projector at a convenient distance near but not tight to the back of the room, focus its beam and outline its margin on the opposite wall or screen. (The author has a large white space on one side of the preview projection room painted flat white.) The projector should not be tight to the rear wall because of the variation in "standard" projection lenses. Similar projectors might need to be moved back slightly to exactly fill the projection space. The projected width should not be less than 40 inches. Outline the projection area at the selected distance for motion pictures, filmstrips, 2x2 slides, and standard or overhead projectors if needed. Then mark and letter significant points for testing the variation in projector illumination as shown in Figure 1.

In testing combination 2x2 and filmstrip projectors we usually test the square pattern only, unless we wish to compare a filmstrip projector against the filmstrip part of a combination projector. In testing the illumination by opaque projectors, cover the projection area with white paper.

Intensity of illumination is usually measured by *foot-candles* (the intensity of illumination measured one foot horizontally from a standard candle). The *output* of light is now expressed in *lumens*. One foot-candle is produced by light falling at the rate of one lumen per square foot, yet one candle *power* is equal to 12.57 lumens. Foot-candles multiplied by the reflectance of the screen give *foot-lamberts* (the measure of brightness of the image seen by the viewer).

As you proceed further from the projector the foot-candles of illumination will become less but the lumens of output will remain the same. With certain photographic photo-electric meters you can measure the foot-candle light units received at each of the points in Figure 1 for a given screen area or given projection distance using a given focal-length lens. The *incident* rather than the *reflected* rays should be measured to avoid introducing the variability of the reflecting surface. These units and conditions are "reportable" and could be duplicated by other experimenters.

The lumen output of a projector can be measured by obtaining the readings in foot-candles at the nine points indicated in Figure 1 and substituting in the formula:

$$\text{Screen Lumens} = \frac{hb^{n-2}}{9n^{-1}} \Sigma I_n$$

when h and b are the heighth and breadth of the screen in feet.

Another standard measurement is the Corner-to-Center Ratio in which light intensity measurements are taken at the four corner-points, in this case 1/20 the projection width from the top and bottom edge and the same distance from the sides. The average illumination of the four corner-points, divided by that of the center, and multiplied by 100 gives the percentage of Corner-to-Center illumination. This is not a completely satisfactory measurement of the uniformity of screen illumination as sometimes one side is considerably brighter than the other and/or the top is brighter than the bottom, or vice-versa.

See the next page

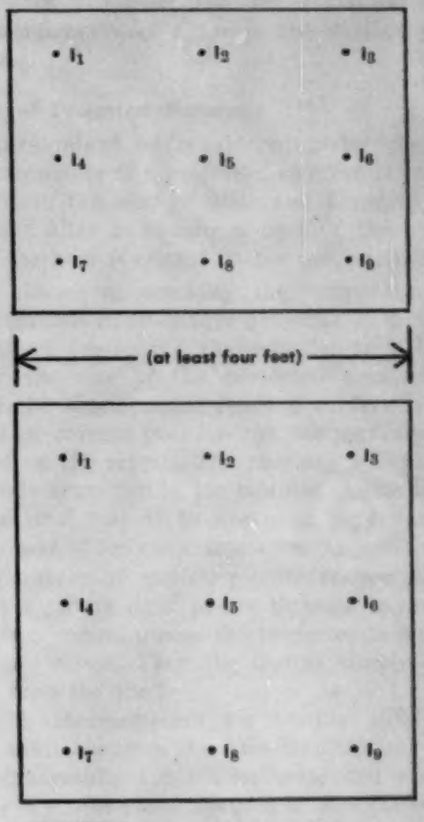
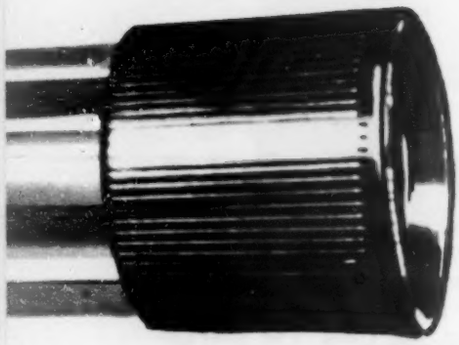


FIGURE 1 Measuring Lumen Output

"I6" is intended as the exact center and the outer points should not be at the very edge but ⅛ of the width from the sides and ⅛ of the height from the top or bottom.



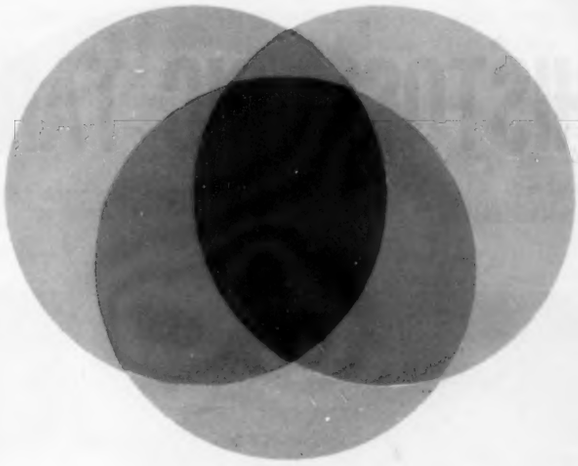
However, for your own satisfaction the units can be any convenient numbers on your meter and you can use reflected light from the wall or screen at the marked points, being careful not to shade the small area with the arm, hand, or meter. When using reflected light the author usually uses the meter in a simple sling suspended by a cord. A meter designed for reflected light can be used for incident ray measurements for this purpose. The light measuring surfaces should consistently be either perpendicular to the incident rays or parallel to the plane of the target screen or wall. The projector should not be tilted up or sideways but have the lens directly opposite and on the same level as point "I_5" of the wall or screen.

Whether you measure by standard units or your own, it is normal to have the center of the projected area somewhat brighter than the periphery. An approximate 25-percent greater illumination of center over sides is considered allowable. The corners may be slightly less than the sides. (The writer once tested several new slide-filmstrip models from the same manufacturer all of which were consistently more than 50 percent brighter on one side of the screen than on the other.)

Resolution—or Sharpness of Focus

The normal single converging lens does not accurately focus light. The rays of light passing through the outer area of the lens are bent toward the axis more than those passing through the central area. This is called spherical aberration.

A special type of spherical aberration which shows distortion at the edges of the image, called coma, results from rays of light striking obliquely on the lens. Astigmatism is the failure of a lens to have a flat field with sharp images at the center and at the edges at the same time. (It would be easier for lenses to project on a concave screen.) There can also be a distortion of the image with a pincushion on a barrel effect, in which a rectangle appears to have concave



or convex sides respectively. Also blue light, because of its shorter wave length, is refracted more than red, hence a beam of light with a mixture of colors passing through a single converging lens will also not come to a sharp focus.

These problems in the construction of projection and photographic lenses are largely corrected by combinations of lenses, using crown and flint glass having different indices of refraction; and by diaphragming the lens, masking out its outer areas. However, as users of projection and photographic equipment, we are interested not so much in the causes but in the corrected results and performance of the equipment. The National Bureau of Standards sells a test chart with directions primarily for testing cameras called *Test of Lens Resolution for the Photographer*, (Circular C 428). This chart can be photographed for use in slide or motion picture projectors, but remember that the camera and light-sensitive recording media are also limiting factors. Use high quality cameras, a medium stop, and fine grain, high contrast "slower" film. Very small stop openings (large numbers such as 32, 22, and 16) with miniature and motion picture cameras will of course give a greater depth of field but will increase the diffraction of the light and may cut down the camera's resolution ability.

The author has photographed the want ad section of a newspaper (small print) and pages of a telephone directory to make slides and motion pictures for test purposes. Projectors will usually show some lack of sharpness at the corners if the center of the "picture" is in focus but some projectors are much worse than others in this critical test. The chart, page from the telephone directory, or want ad section itself can be used with opaque projectors.

The standard method for determining resolution power for 35mm slidefilm and 2x2 slide projectors is using a standard slide having resolution test patterns with black lines and alternating white spaces. The lines vary from 10 to 80 per millimeter. (This slide can be obtained from the Buckbee Mears Co., Lindke Building, St. Paul, Minn. for $19.50.) The more lines per millimeter that can be clearly distinguished when projected, the better the resolving power. This number may differ in the various parts of the screen.

Temperature of Projected Materials

Temperature might be considered under the mechanical performance of a projector, as a fan is usually involved, but in the case of slide and filmstrip projectors a heat filter is usually a part of the optical system and the heat is caused by the projection lamp.

A useful device in checking the temperature of projected materials in an opaque projector is to scotch tape a chemical (mercury) thermometer to a heavy black paper the size of the projected area of the machine. If the thermometer reading surface is facing upward in correct position the temperature will be projected on the screen. The mercury will usually cease to rise in from two to five minutes. A less severe and more normal test is to use gray paper and/or cover only a part of the projection area.

The temperature of motion picture frames is less critical as the strong light passes through it for less than 1/24 of a second unless the projector is stopped for a still projection. Then the test is simply—does it blister or burn the film?

Slides with thermometers for testing slide projectors are available from the American Optical Company, but the results are not accurate and are not accepted by the American Standards Association. A thermo couple should be used for accurate tests.

Fans are used in projectors to remove the lamp heat as well as to cool the projected material. Both functions are important and neither should be neglected. Look for the placement of the fan and determine if the hot air from the lamps and housing is blown upon the projected material. [THE END]

TACHISTOSCOPIC TARGETS

for the filmstrip projector

Of first importance: Every student must see the image clearly. Check every corner of the room to make sure that no student is handicapped in this respect.

GASPAR CISNEROS BARNETTE

IT WAS A HUNDRED YEARS AGO, in 1859, that Sir William Hamilton conducted his experiments in instantaneous perception, but it is only within the last two decades that tachistoscopic techniques have graduated from the laboratory to the classroom. Used successfully by thousands of teachers, they have proved their value as a means of increasing the learning facility of students of varying abilities at all grade levels in a wide range of subjects.

Emphasis today is on their employment for increasing reading ability. They are being used with the slow learner and inadequate reader as well as the gifted student and skilled reader to help him make the best possible use of his reading capacity.

Practically every student exposed to well planned and consistently administered tachistoscopic lessons improves. Some show spectacular increases in reading comprehension, retention, and rate in short periods of time. As a result, enthusiastic teachers have often hailed the tachistoscope as a miracle teaching tool—which it certainly is not. At best, tachistoscopic teaching techniques are a practical means of attracting the student's attention, and through the employment of targets suitable to the subject to be taught, getting the student to perceive, recognize, and react

The author, a specialist in tachistoscopic materials and techniques, is associated with Learning Through Seeing, Inc., of Sunland, California. He was formerly visiting lecturer in audiovisual education at Occidental College in Los Angeles. *The article was made possible through the good offices of Robert H. Burgert, Materials editor.*

in some way calculated to help him learn. At its worst it may be an amusing toy used as a reward if the student has been "good," or to provide a change of pace. Not enough teachers have utilized the keen interest students have in tachistoscopic methods to improve spelling, arithmetic, reading, and other subjects.

In the past the preparation and administration of a well organized lesson and the high cost of special equipment and materials, plus their delicate nature, have combined to limit the tachistoscopic approach.

The modern filmstrip projector is admirably suited to tachistoscopic purposes and is almost universally available. Teachers are accustomed to it, and the addition of a flash attachment is relatively simple. While there are other specialized audiovisual devices and materials on the market for use in the field of reading, this article is limited to methods, materials, and devices suitable for use by the classroom teacher who has access to any regular 35mm filmstrip projector.

Speed Limits in Learning

True tachistoscopic training requires exposures faster than 1/12 or 1/15 of a second, the single fixation threshold of the average person. However, exposures of 1/25 to 1/50 of a second appear to be ample to obtain the attention and concentration necessary to create an adequate learning situation. Faster speeds apparently do not contribute anything additional to learning and may frustrate students who are unable to achieve.

An expensive camera shutter or electronic instrument is therefore not essential. A guillotine or flash board device may adequately control exposure. The flash board has the advantage of being sufficiently flexible that it provides a suitable range of speeds for classroom instruction. It sits in front of the projector and does not disturb focus or cause jarring of the image on the screen. Since it does not have to be reset each time, rapid sequence exposures are easily accomplished. Guillotine shutters and flash boards vary in price but are generally $10 or less. Some such flash attachments are so ruggedly built that they may be operated by students without fear of damage.

Tachistoscopic targets should be easily visible, without glare. It is therefore preferable to expose only the word or other item to be viewed rather than to light up the entire screen with each flash. White letters on a dark background also permit a more visible screen image in difficult projection situations.

The problem of planning lessons is considered most serious by teachers who have used the tachistoscope. Selection of targets for any given subject can be too time consuming. Filmstrips providing planned lessons at all grade levels in various subjects are one answer. Some filmstrips incorporate a sequence of instructions, lesson material and answers which simplifies presentation and increases the effectiveness of the lesson.

Form and number training teaches the student attention, concentration, retention, and accuracy. With extremely young or severely handicapped students simple targets such as familiar objects, diagrams, or line drawings are employed with responses restricted to those within the student's capacity. The fact that he can check his responses after the exposure of a few targets builds a concept of accuracy which has often been lacking. Many teachers find that students who are permitted to correct their own tachistoscopic work and discover their errors during the lesson make better improvement than when correction is done at a later time by the teacher.

Numbers, and code groups of numbers and letters, may be employed at all grade levels with excellent results. Depending upon the exposure time, they may even be employed with severely retarded students. It is customary to begin with one or two letters or digits and increase the number of items during the lesson to provide the student with a feeling of accomplishment. Thus, a lesson might begin with two digits and conclude with four. The student may well be able to achieve two or three digits but four might be a challenge for him. As he improves, the lesson can be started with three or four digits or letters and increased to five or six, etc.

Vocabulary development at various grade levels can be accomplished through the use of sets of filmstrips on phonics, fundamental sight vocabularies, prefixes and suffixes, Latin and Greek roots which are used in the English language, and word derivation. The needs of the students and the teacher's preference may determine how such tachistoscopic lessons will be employed. Some students may merely say the word and write it while the more capable student can use the word in a phrase or sentence, define the word, derive additional words from it, etc.

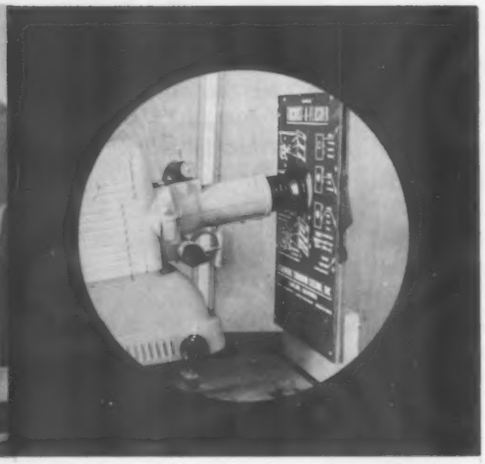
Edward Bernard Fry, director of the reading clinic at Loyola University of Los Angeles, has developed a series of *Instant Words* which include the most used words in reading and writing the English language. They have been incorporated into filmstrips with lessons graduated as to the frequency of use of the words. Because they include a high percentage of all words the student encounters, the *Instant Words* can be used to good advantage in both initial vocabulary training and remedial reading.

Filmstrips for phrase reading improve the student's reading ability by teaching him to see and think in units of thought rather than adhering to a word-by-word reading process. *Instant Word Phrases* have been prepared, correlated precisely with the *Instant Word* series. The student can first learn the words and then practice those words in meaningful phrases. These techniques are particularly valuable with the retarded reader.

Reacting to Units of Thought

Tachistoscopic lessons for improving comprehension, retention, and reading rate, usable on any filmstrip projector, and which include instructions, lesson material, questions on the lesson, and answers to the questions, provide the teacher with an effective and easily administered method of improving reading facility at varying grade levels. These range from a

Nearsighted students crowd up to the screen while a farsighted one stays back with the instructor.



Sturdy, inexpensive, easy to operate, the flashboard can be used with any filmstrip projector. Placed in front of, but not fastened to the projector, it resets automatically after each flash, has provision for full open, or time exposures, and speeds to 1/40 second.

series of 36 elementary reading selections with questions and answers which employ a total vocabulary of only 338 words, to complex lessons of a similar nature which challenge the good reader at the college or adult level. Because they do not require special equipment or techniques in presentation, they can also be used by small independent groups of students or for self-instruction. The sequence of instructions, lesson, questions and answers provides a ready means of supplying information, inquiring to determine whether the proper concept has been gained, and checking how accurately the student has interpreted the materials.

An Aid to Spelling Accuracy

It has been observed that spelling may be greatly improved when words are exposed tachistoscopically. The concentration required to perceive the flashed image helps the student to learn it correctly. The exposure of a few words, followed by an answer frame from which he can correct his work both simplifies presentation and increases student interest and accuracy.

Many students who are frustrated in reading exhibit apathy or even antagonism toward the printed page which does not show when reading from a projected tachistoscopic image. As they progress in such training their frustration is overcome and reading from books becomes more pleasant. When written responses are required, the ability to see efficiently at both far and near points may be improved. This often helps the student who has a visual problem when reading from books.

Teachers who have used tachistoscopic techniques are impressed with the continuing development of student interest, the variety of materials which can be presented, and the accelerated learning which takes place.

It might be said that the tachistoscopic approach is supraliminal. The attention and concentration required to see an image exposed for a brief period of time apparently conditions the student so that what he sees is more thoroughly absorbed than when an unlimited amount of time is available for him to perceive, recognize, and respond to a given stimulus. Educators have long expressed interest in its potential, and the advent of easy-to-use and low-cost ways of applying it should result in its application to a wide range of subjects and the ultimate inclusion of it as a standard technique in all teaching. As its use expands in the second century of application to educational problems, the great-great grandchildren of today's students may well attain a high percentage of their education through tachistoscopic teaching techniques.

Suggested References

Irving H. Anderson and Walter F. Dearborn, *The Psychology of Teaching Reading*, Ronald Press, New York, 1952

Gaspar Cisneros Barnette, *Learning Through Seeing with Tachistoscopic Teaching Techniques*, Wm. C. Brown Company, Dubuque, Iowa, 1951

Gaspar Cisneros Barnette, *Outline for Improving Reading Skills*, Monograph, Learning Through Seeing, Inc., Sunland, California, 1958

Edward Bernard Fry, "Developing a Word List for Remedial Reading," *Elementary English*, November, 1957

Edward Bernard Fry, "Filmstrips in Reading Instruction," *Film World Magazine*, August, 1957

Sources of Materials and Equipment

(These are sources of tachistoscopic materials and equipment that can be used with any filmstrip projector.)

AUDIO VISUAL RESEARCH, 531 South Plymouth Court, Chicago 5.

SOCIETY FOR VISUAL EDUCATION, INC., 1345 Diversey Parkway, Chicago 14.

LEARNING THROUGH SEEING, INC., Sunland, California.

Some thoughts on Communication

FRANKLIN DUNHAM

TO PARAPHRASE AN OLD ADAGE—"Hearing is believing, but seeing is the naked truth."

Of course we know hearing is not believing. If we tried to defend this statement, we would have to acknowledge that all the old wives' tales transmitted down the ages must be believed. Seeing, for some strange reason, presents a more difficult problem. We are prone to believe what we see. Research, however, teaches us that we are on shifting ground even in this area. Take the eye-witness accounts of various people who see an accident. They swear under oath that "this was the way it happened" and utterly contradict one another, even when reporting from the same spot. The magician has, through the ages, taken advantage of this defect in our visual processes and thousands of instances of optical illusions as well as sheer trickery have entered our folklore.

So, you cannot believe all that you hear and certainly seeing is not the naked truth.

One of the most remarkable examples of exposing the errors that our senses are heir to has been the Gateways to the Mind television series by Bell Telephone over NBC, which definitely shows how the senses alone are inadequate to make judgments for us.

Where does that leave us? It seems to me it definitely notifies us that we must train our senses and train our minds and that this is to be done by the human will. Then, and then only, do we graduate to the levels of listening and viewing.

Irving Lorge, one of the great authorities in the world today in the field of communication tells us that communication involves the reciprocal interaction of sending and receiving signals, of composing and understanding messages and (best of all) of sharing and enjoying ideas. So we begin to sense that there is no such thing as one-way communication.

There is no effective communication, either, unless it contains an idea. To me, an idea is a series of concepts, little cameo-like pictures which register on the mind when we hear something and when we see something. The definitions of these concepts depend upon whether we listen attentively or whether we view critically. When these concepts are stored in our minds, they arrange themselves in sequence and lo! an idea is born.

In listening perhaps we can find a good example in music. It is a universal language and, like all languages, it has form—it has structure. This is the framework that carries the idea—the skeleton on which

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This article is an excerpted version of an address by the author before the National Association of Exhibitors meeting in Washington last fall. Dr. Dunham, who is chief of radio-television for the U. S. Office of Education was "saluted" by this magazine in its January 1959 issue.

the flesh is put. The most satisfactory form for a complete idea is the sonata form. Here we have first a statement containing musical sentences like those within a paragraph. Then we hear a development, another paragraph working over the theme of the original statement and introducing others. Finally we have a restatement bringing back the principal theme once more, often in the same key as in the first paragraph, and beyond that, a conclusion or "coda," pointing up the importance of a good ending. The qualities distinguishing the composition will be our old friends—unity, coherence, and emphasis. Unity must possess variety, coherence must possess ease of movement from one theme to another, and emphasis must place distinguishing marks upon one theme so as to raise it in importance above the rest.

This is an art principle based on life. We are born in a statement, our lives go on in development, and we end in a restatement of everlasting life.

Let us apply these principles now to viewing. In the last century John Ruskin did it for us in *The Seven Lamps of Architecture*. In this generation, John Canaday a few years ago gave a series of lectures at the Philadelphia Museum of Art to explain the pictures in that museum and their relation to others created through centuries. (You can get this series, with four-color reproductions, in the Art Seminars for the Home distributed by the Metropolitan Museum of Art.) Canaday begins with "What Is Painting?" then breaks his subject down into three major schools—Realism, Expressionism, Abstraction. He launches into composition and techniques, and finally, he considers the artist as a social critic and as a visionary—you might say, the artist as creator of program music which has a story and as creator of pure music which is just poetry. Thus we see all imitation of life is art and the greatest art is the greatest compliment that man can give to life itself.

Art Versus Science

Art, then, consists of the way we do things. Science is only a body of knowledge organized in such a way as to offer us constant opportunities for exploration. Both communicate to us through listening and viewing.

What they communicate can be universally great or infinitesimally small, according to what we bring to them. Mark Hopkins at one end of the log and the student at the other is a perfect learning situation so long as it is two-way communication. The sender and receiver are equally important in the process. If they perform their rightful function, they share an idea in a verbalized process of speaking and listening.

The principles, you see, remain the same. If we present a good story it must have an idea built on a series of valid concepts. If it is presented well, it must have unity, coherence, and emphasis. If it is calculated to hold interest, it must consist of a statement, a development, and a restatement to carry the idea to a logical conclusion.

This, then, might hearten us to rethink some of our affirmations that affect the new media in education. It might even induce us to take another look at education, itself.

Poetry

THE GREAT OBSTACLE to be overcome in learning to read poetry with understanding and appreciation is in interpreting for the ear, and hence the mind, what is presented to the eye. Students who don't like poetry will tell you they've seen too much of it; what they might add is that they've heard too little. The purpose of this article is to show how a tape recorder may be used to strike a balance.

Why isn't poetry through the eye enough? First, poetry is written in lines, which have metrical rather than grammatical integrity. The beginner, who understands about sentences in prose, is often confused by poetry, because he expects the lines to make his kind of sense, whereas they make a quite different kind of sense. In blank verse, especially, the lines contain five feet, more or less iambic, while the thought often runs on into the next line. When the reader has caught on to poetry, he will understand that the line is just as much a part of the pattern as the sentence units. How better learn than to watch a text and at the same time listen to the poetry read aloud? A good reader will observe the ends of lines by a slight emphasis on the metrical turn without breaking the integrity of the thought. He will not slight the ends of lines as if he were reading prose, nor will he pause at the ends of run-on lines without regard to the thought.

In the second place, the sound patterns in poetry are more significant than they are in prose. A person used only to reading prose is quite unaware of the music that accompanies a poetic statement, even when the sound patterns are as obvious as they are in the poems of Poe or Swinburne. One way to teach students to look for sound patterns and sound symbolism is to point out examples and call them by their names—refrain, repetend, incremental repetition, end-rhyme, internal rhyme, near rhyme, alliteration, assonance, and consonance. But it is more effective to have them heard as well as defined, and to have their full effect, they must be heard in an actual reading of the whole poem. The teacher must read the poem himself or play a recording. Later, he may have students read aloud to show how much they have learned about the music of poetry.

Finally, tone in poetry is critical, especially in dramatic poetry. And tone is almost impossible to

"Dr. Ward is one of my best customers," writes Bob Bauman, director of the audiovisual center at Macalester College (St. Paul) where the author is professor of English and chairman of the English Department.

through Eye and Ear

F. EARL WARD

teach except by reading aloud or playing a recording by a good reader. Tone is the speaker's attitude toward his subject and his audience. Is he happy, angry, gloomy, pompous, sarcastic, or what? Tone is often mistaken by inexperienced readers for intention. Intention belongs to the poet, tone to the speaker, who is often different from the poet. That is, the speaker is someone imagined by the poet. Even when the poet is speaking in his own character, he speaks for one of his own diverse selves—patriot, lover, farmer, philosopher, mourner, partisan in religion or politics.

When tone and intention are at odds, we say that the poem is ironic. Then the interpreter has the double responsibility of indicating both tone and intention. No one can say what the tone in a poem is until he has studied the poem to identify the speaker and analyze his state of mind. This a conscientious reader will do before he attempts to interpret the poem orally. By listening to good oral interpretations, the student will gradually shed his literary naiveté and will begin to look for poetic sincerity rather than the common variety. For example, he will be able to read *L'Allegro* and *Il Penseroso*, which contradict each other almost line for line, without accusing Milton of being insincere. And to read Browning's *Porphyria's Lover* without thinking that Browning was the man who strangled his sweetheart and waited all night for God to do something about it. Of course, the teacher can and should explain about dramatic poetry, but he will do better if he adds to his explanation by having the students hear a dramatic reading.

There's a Time for Recordings

Now, English teachers generally present poems in the ways suggested here, and some of them do it remarkably well day after busy day. But there come times, such as eight o'clock in the morning of the day after a sleepless night or when they have a cold, that even best teachers and readers are not in top form and would welcome some assistance. Then is the time to call on recordings. There are many such now on discs. When the teacher is a good oral interpreter himself and has had the time to make a tape recording, he then has a means to rest his weary voice. Students will feel honored that he has taken the extra trouble of preparing the reading. And he will find that the very act of making a recording is a learning experience, especially when he listens to what he has read and tries again until he is satisfied. This he can do under the best conditions, when he is fresh and by himself.

Solitude is the proper place for reading poetry, in spite of what actors and speech teachers may say about the necessity of an audience. Poetry is a private affair, meant not so much to be heard as overheard. The most sensitive readers are often the most introverted. The timid soul will sometimes speak into a microphone as he wouldn't be caught dead speaking before an audience. He will probably blush afterwards when he plays the record for his class, but that can be amusing, too. At any rate, some of the most accomplished actors and speakers are poor at reading poetry.

The Rewards Are Not Pecuniary

For the past ten years I have been making tape recordings for my poetry classes. I have found myself growing in both understanding and oral presentation. At first, my equipment was not of the best, but I have since provided myself with a professional tape recorder and can reproduce my intention with considerable fidelity. It occurred to me that other teachers might profit by having some of these recordings for use in their classes, and so I am offering them for sale. I have made no attempt to manufacture copies on a mass basis, but have produced duplicates as they are required. This has the advantage of offering a greater range of subjects than could be offered if every reel had to be widely sold. Though I don't make much money, I don't lose any, and I have the satisfaction that I am contributing to the teaching of English.

EDITOR'S NOTE: Professor Ward's reels are offered for sale under the label TRP (Tape Recorded Poems). For information and a complete list of titles write TRP, 1403 Sargent Avenue, St. Paul 5, Minn. Some samples follow:

*S. T. Coleridge, *The Rime of the Ancient Mariner*

*Edgar Allan Poe, *The Raven, The City in the Sea, Ulalume, Annabel Lee, To Helen, The Bells*

*John Keats, *The Eve of St. Agnes*

Longfellow, *The Tide Rises, The Cross of Snow, Paul Revere's Ride, The Jewish Cemetery at Newport,* and others

Walt Whitman, *Out of the Cradle Endlessly Rocking,* and *When Lilacs Last in the Dooryard Bloom'd*

Chaucer, General Prologue and Miller's Prologue from *Canterbury Tales* (Middle English), cuts from Friar's Tale, Nun's Priest's Tale, and others in Middle English.

Alexander Pope, *The Rape of the Lock*

Robert Browning, *Fra Lippo Lippi, Andrea del Sarto,* and others

Edward Fitzgerald, *The Rubaiyat of Omar Khayyam*

Alfred Tennyson, *Tithonus, The Lotos Eaters, The Holy Grail, Morte D'Arthur,* and others

Matthew Arnold, *Sohrab and Rustum*

* Also available on LP discs

Al draws pictures of his hospital experience. From "Al in the Hospital," Disraeli Films.

What goes into a GOOD FILM GUIDE?

RITA HOCHHEIMER

Rita Hochheimer was instrumental in organizing, and was for many years in charge of the Visual Instruction (later Audio-Visual Instruction) Bureau of the New York City public schools. This career was the result of her pioneer use of films and slides in foreign language teaching in the Washington Irving High School in that city. She was one of a small band who organized the Metropolitan Audio-Visual Association and was active in organizing DAVI. She is a past president of both organizations. Since her retirement, Miss Hochheimer has served on the faculty of the New School and as educational advisor for producers in the AV field.

A FILM GUIDE is prepared to increase efficient utilization of material by teachers and discussion leaders. Preparation of a guide calls for professional disciplines and experiences, and when it is the result of actual preliminary utilization in classroom situations with children it has great validity. (A distinction should perhaps be made here between a producer's guide and a "blurb" which has little relation to a professional presentation. The purpose of the latter, similar to that of the "commercial spot" on radio and television, is to make known to as many people as possible the availability of the material and to induce sale or rental of the product. Generally, as compared with much of radio and television exploitation of products, the blurb for educational films is restrained.)

With this distinction in mind, guides vs. blurbs, it is hoped that the writer's experience in the preparation of teachers' material may prove suggestive.

The validity of film guides, as we have said, depends largely on the practice of preparing them through trial and error in classroom situations. Guides prepared in a vacuum according to a schematic outline devised by an adult far removed from children tend to lose meaning, becoming dry and lifeless. Children will indicate (sometimes with disconcerting frankness) what their reactions and opinions are.

I, myself, had one such experience, which I consider illuminating, although I am at a loss to explain its psychological basis. I showed a film of a boy's hospital experience to three classes. At the time it had no main title. I discussed an appropriate title with the children, suggesting *Al's Hospital Adventure* and *Al's Stay in the Hospital.* Unanimously, they rejected both for the simple *Al in the Hospital* suggested by one of their own number. (See list at end of this article for data on films referred to.)

The Importance of Pre-Testing

The practice of preparing teacher's material on the basis of class utilization is in my opinion essential. It is not, I believe, sufficiently widespread at present. If guides prepared for nationwide use by producers are to have ready acceptance they must be based on children's reactions in connection with their production. In fact, this is true of the films themselves. The more widespread the practice becomes of pretesting films in classrooms, the more useful the resulting materials will be in the classroom.

Even when they are prepared in consultation with

experienced classroom teachers, producers' guides can at best only indicate the areas and the general situation in which to use the film. Specific applications and situations must be developed by the teacher or a committee of teachers to meet specific class needs.

Frequently teacher committees undertake the production of guides utilizing commercially prepared ones as the basis of their work and often the preparation of these guides serves as a valuable professional project for groups of teachers—in fact, as an extension of teacher training in audiovisual utilization.

The give-and-take discussion among teachers inevitably increases their recognition of the usefulness of AV materials as teaching tools. No matter how informal their appearance, these guides have the inestimable value of authenticity for their users. Arising from motivations aroused by a film, the school-prepared guide develops activity projects based upon community situations. This gives the guide the kind of specialized touch which no producer's guide made for national distribution can achieve. For example, a guide produced by the schools of one community on a recently released film, *Bridges*, assists the teacher by directing her to local river and railroad bridges and similar structures.

Geography Enters In

Guides for a given film prepared by one teacher or by a small committee of teachers in one school will also vary from the printed references in official courses of study made available to all the schools in a large system. For instance, the guide to *Birthday Present to America* contains special research material for the teacher which is referred to in the official course of study for New York City schools. However, a teacher committee may decide that bright children or those from culturally enriched homes can use this material as an experience to develop their own research skills. Similarly, geographical factors sometimes have a bearing. These are significant only in a local situation. To cite the same film, classes in the New York Metropolitan area will undoubtedly be motivated by it to visit the Statue of Liberty, whereas teachers in other areas will plan to visit their own monuments and patriotic shrines as a result of the interest aroused by the film. These class excursions will be suggested by the teacher committee who will, if necessary, also make detailed recommendations for arranging the trips.

Language recommendations as to word study and discussion topics, perhaps based on a guide prepared for national distribution, will take into account the situation in the given school. This depends on the socio-economic status of the community and particularly on whether or not there is a non-English speaking group present.

Specific topics, suggestions for class committee projects, and such devices as puppets and "paper movies" will evolve from the AV committee's discussion of the film based on the members' experiences with their own classes. While the main subject matter area is indicated by the producer's material, additional applications will become evident in the committee discussions. For instance, *The Life and Times of a Balloon* must not be so belabored for academic content as to lose its primary purpose of stimulating free discussion for small children. However, a teacher whose upper-grade class is considering buoyancy of gases would immediately recognize its applicability in this area. Teachers must be alert to recognize varying uses of any material.

Guide Has Stimulator Effect

A producer's guide is not necessarily a recipe or formula to be rejected or to be applied strictly as it has been prepared. Its purpose is to stimulate the teacher toward a creative application of the film. Only a teacher can tell where a film fits the needs of her class. The teacher must be at all times amenable to children's suggestions as expressed in class discussions so as to fit material into as many subject matter areas as it will serve.

In this connection it is important not to neglect the aesthetic elements of a film. In *The Life and Times of a Balloon* the original music is a basic element of value. Among young children a spontaneous rhythmic recognition is stimulated, whereas older children can be led to discuss the type of music used and compare it with familiar classics or "rock and roll." Similarly, aesthetic elements of pictorial composition or striking color in films should not be lost sight of.

Doesn't this committee activity take time and effort on the part of teachers? Yes, it certainly does! But after a time a school adds guide material only for new films as they are purchased. Consequently, preparation of additional material for individual films from time to time should not become too burdensome. Membership on committees charged with preparation of film guides should be rotated among staff members, so as not to fall too heavily on a few persons.

Experience has demonstrated that:

- This cooperative task of preparing teacher's material to accompany films in the school collection is an excellent means of teacher training.
- There is a validity and immediacy to the resultant suggestions that make a strong appeal to teachers.
- The material prepared within the schools is of great assistance to new inexperienced teachers. It serves to give them confidence in a field in which they may feel confused and bewildered.

Film References

(The films referred to in this article are all produced and distributed by Robert Disraeli Films, P.O. Box 343, Cooper Station, New York 3, N. Y.)

Life and Times of a Balloon, 16mm, color, with music, 11 minutes. For early childhood and primary grades. Language Arts and Elementary Science.

Al in the Hospital, 16mm, black and white, sound, 22 minutes. Early childhood and primary. Health and Safety, Social Studies and Life Guidance.

Birthday Present to America, 16mm, black and white, sound, 14 minutes. Intermediate grades and junior high. Social Studies and American History.

Bridges, 16mm, black and white, sound, 10 minutes. Early childhood and elementary grades. Social Studies.

THE BIG PICTURE in Membership

FLORENCE FAN and ALICE FINSTAD

THE "BIG PICTURE" on these pages is the outgrowth of a survey by our membership staff preparatory to sending out information to state chairmen as reported last month in AUDIOVISUAL INSTRUCTION. Having worked up totals for each state, we determined to see what we could construct in the way of a national picture.

Immediately it became clear that the total membership for each state is a meaningless figure for comparison purposes unless related to the state potential. Since "school buildings" seemed a less valid base than the old reliable "average daily attendance," we chose the latter. Thus you will note on the chart (Figure 1) a column designated "incidence ratio" which means simply the ratio of DAVI membership to school population (based on average daily attendance). Remember when referring to this figure that it denotes the number of pupils (in thousands) for every DAVI member. Hence, the lower the figure the higher its value. For instance, the District of Columbia has 95,000 pupils and 53 DAVI members which gives it an incidence ratio of 1.79 (one DAVI member per 1790 pupils). This is the highest recorded.

We might add here that as far as the District is concerned we consider this an artificial ratio because of the concentration in Washington of governmental agencies, educational foundations and other enterprises whose memberships are not related to the classroom. We are aware, too, that these and other qualifying factors obtain in other instances in this study; however, we think that the overall is a fair picture.

You will note on the chart that the incidence ratio ranges from a high of 1.79 to a low of 37 (again this means one DAVI member for every 37,000 pupils in the state). This range is what we are concerned with in Figure 2—the line graph which shows a gradual drop from 1 to 16 and a sharp decline from 16 to 37. This would indicate, it seems to us, a fairly consistent level of membership activity except in a few states.

The map (Figure 3) gives you finally the geographical distribution of active and sluggish areas. Better than anything perhaps, the map bears out our reports in past issues of AVI; see, for instance, the healthy color of Vermont, Washington State, Georgia, Utah, and Wyoming, among others. Results of a recent campaign bring North Dakota (always a good membership state) into the top bracket. You will recognize many others as states where DAVI has always had active organizations; you may be surprised also to find that some states renowned for strong AV programs are not proportionately represented in the national organization. (There was, of course, no way to incorporate Canada into the "incidence ratio" picture; nor would any comparison on that basis be fair. In any case, our international affiliate has shown steady increase in membership since it became part of DAVI two years ago.)

Three cautions when looking at the figures in this presentation: (1) The Every-Member-Get-A-Member computation is entirely separate and no attempt should be made to figure this column into the rest of the chart. Discrepancies in totals are accounted for by expired memberships which are not shown; (2) the incidence ratio indicates *pupils* represented by *one* DAVI member; and (3) the percentages which give the key to the map are based on the range of incidence ratio as shown on the curve. We have designated our top category as roughly the top 10 percent of the curve; the next as the top 25 percent and so on.

Added Note: The ADA figure (from *Statistical Summary of State School Systems, 1955-56,* Circular No. 543, U. S. Office of Education) is given in the column with the state name. This gives you a chance to check our computations. Have fun!

Figure 1

STATE AND ADA (K-12)	TOTAL MEMBERS JANUARY 1959	TOTAL MEMBERS JULY 1958	INCREASE (or DECREASE)	EVERY-MEMBER-GET-A-MEMBER CAMPAIGN (Total Gain for Nov-Dec-Jan)	INCIDENCE RATIO
Ala, 649	18	19	—1	1	36.05
Alaska, 27	2	1	1	2	13.5
Ariz, 191	30	26	4	0	6.36
Ark, 360	11	12	—1	0	32.7
Calif, 2360	357	336	21	25	6.61
Colo, 275	40	40	0	2	6.87
Conn, 350	83	82	1	2	4.21
Del, 57	8	8	0	0	7.125
D. C., 95	53	49	4	0	1.79
Fla, 632	219	211	8	13	2.88
Ga, 747	114	73	41	36	6.55
Hawaii, 113	10	10	0	0	11.3
Idaho, 131	9	5	4	2	14.55
Ill, 1309	191	187	4	16	6.85
Ind, 742	132	114	18	17	5.62
Iowa, 492	33	31	2	2	14.90
Kans, 381	33	27	6	8	11.54
Ky, 535	23	23	0	1	23.26
La, 532	19	16	3	2	28
Maine, 164	10	11	—1	0	16.4
Md. 438	39	44	—5	2	11.23
Mass, 689	91	92	—1	4	7.57
Mich, 1264	155	147	8	12	8.15
Minn, 545	102	102	0	6	5.34
Miss, 444	12	10	2	1	37
Mo, 631	57	54	3	6	11.07
Mont, 116	12	9	3	2	9.66
Neb, 237	29	28	1	2	8.17
Nev, 44	5	4	1	0	8.8
NH, 81	12	10	2	1	6.75
NJ, 766	88	87	1	5	8.7
N Mex, 161	28	19	9	7	5.92
NY, 2115	390	388	2	17	5.42
NC, 927	39	30	9	8	23.76
N Dak, 117	47	34	13	9	2.48
Ohio, 1468	112	98	14	11	13.10
Okla, 453	41	43	—2	2	11.04
Ore, 298	53	48	5	0	5.62
Pa, 1610	105	93	12	8	15.33
PR, 483	48	5	43	40	10.06
RI, 103	11	9	2	1	9.36
SC, 482	17	19	—2	0	28.35
S Dak, 120	10	8	2	2	12
Tenn, 678	45	43	2	3	15.06
Texas, 1536	96	82	14	12	16
Utah, 181	23	16	7	10	7.86
Vt, 64	26	15	11	9	2.46
Va, 668	50	57	—7	2	13.36
Wash, 475	120	92	28	20	3.95
W Va, 416	19	19	0	0	21.89
Wis, 547	65	57	8	7	8.41
Wyo, 64	13	9	4	4	4.92
Canada	68	56	12	7	
(Foreign Countries Are Not Shown)					
Totals			336	349	

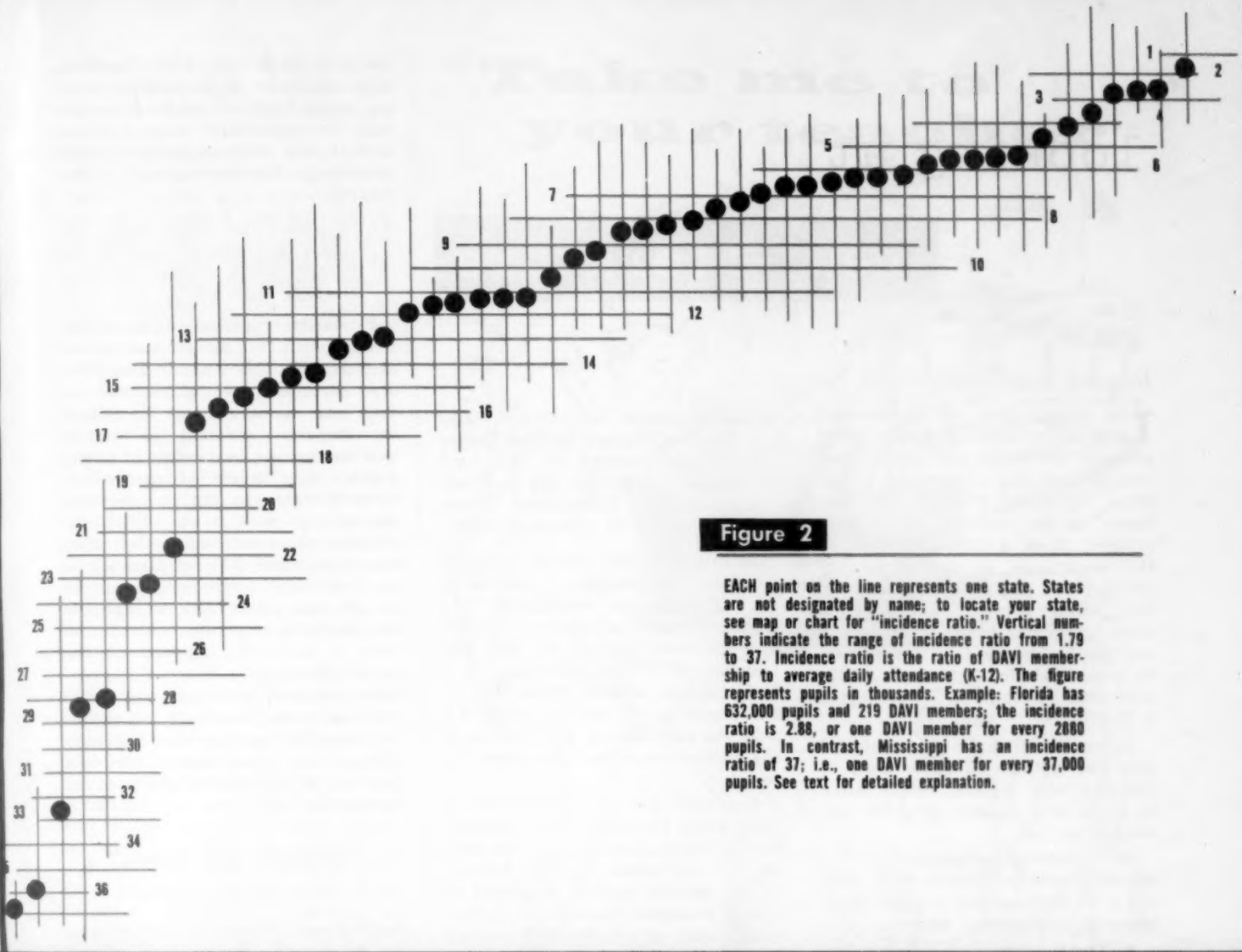

Figure 2

EACH point on the line represents one state. States are not designated by name; to locate your state, see map or chart for "incidence ratio." Vertical numbers indicate the range of incidence ratio from 1.79 to 37. Incidence ratio is the ratio of DAVI membership to average daily attendance (K-12). The figure represents pupils in thousands. Example: Florida has 632,000 pupils and 219 DAVI members; the incidence ratio is 2.88, or one DAVI member for every 2880 pupils. In contrast, Mississippi has an incidence ratio of 37; i.e., one DAVI member for every 37,000 pupils. See text for detailed explanation.

Figure 3

looking at

new literature

Edward T. Schofield

THE ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT prefaces its recent publication, *Curriculum and the Elementary School Plant*, by stating that the "developments of the past 12 years have brought about a new awareness of the importance of the elementary school plant and of the relationship that exists between program and plant." (Written by Helen Heffernan and Charles Bursch, the 71-page booklet is available for $1.50 from ASCD, 1201 16th Street N. W., Washington 6, D. C.)

In implementing the above point of view the authors prospose that, in planning new schools, consideration be given to a 10-point program providing for:

- An instructional materials center including a school library with work space for librarian and storage for all types of instructional material.
- Transporting of classroom collections of books in easily movable carts.
- Instructional materials needed for art, construction, music, homemaking, science, projection of films and filmstrips, and recording, arranged in easily movable carts for transporting to classrooms.
- Ramps rather than stairs, whenever possible, to facilitate transportation of books, materials and equipment.
- Three-dimensional exhibit cases in the instructional materials center and in corridors.
- Classroom files for fugitive materials.
- Classroom use of audiovisual materials and television and radio reception.
- Room darkening and projection screen in each class space.
- Closed-circuit television transmission within the school.
- A collection of special maps, charts, globes, recordings, flat pictures, pamphlets and the like, easily accessible to teachers and children.

Visual Perceptual Abilities and Early Reading Progress by Jean Turner Goins. University of Chicago Press, Chicago 37. 108 p. (Supplementary Educational Monographs, No. 87, February 1958)

In this study the relation of visual perception to progress in reading in the first grade was investigated. Two main tasks were undertaken: the testing of visual perception, and, the training of perception by use of a tachistoscopic method. While the entire report is of concern to the AV field, the part dealing with the use of the tachistoscope has immediate interest.

Renshaw's war-time experiments at Ohio State University with recognition of Navy airplanes and the subsequent application of these findings to the regular reading programs of schools prompted the author to further examination of the Renshaw method. The first-grade pupils participating in the author's study were those in the University of Chicago Laboratory School and the Ray Public School. For ten weeks one group received tachistoscopic form training as advocated by Renshaw, and the other group received no special training. In May all children were retested on Form 1 of the Chicago Reading Tests, Test A.

The findings were interpreted as revealing that "visual form training using tachistoscopic exposures does not increase the reading ability of unselected first-grade classroom groups." It was stated that the "tachistoscopic visual form training leaves much to be desired in terms of improvement in the reading skills of classroom groups who receive it. However, this finding does not rule out the possible value of such training for selected pupils who are experiencing specific difficulties that appear to be related to visual perception."

It should be noted further that the writer emphasizes not so much negation of the tachistoscopic method as she does the fact that the "enthusiastic claims for tachistoscopic training made by previous investigators must be subjected to more rigorous tests if such training can justifiably be given to classroom groups in the future."

An Approach to Photography, by James E. Parker. Audio-Visual Center, North Carolina College, Durham. 1958. 107 p.

Primarily conceived of as an accompaniment to college courses in photography, this manual does however serve the uses of anyone who falls into one or more of the following categories: students who want to broaden their understanding of photography as a means of communication; students who, having discovered photography as a means of self expression, want to develop their own techniques; and students planning to teach who want to prepare themselves to help youngsters with an aptitude for photography or who want to develop a functional approach to the use of photography in school. Appendices include a black and white film selection chart, processing and chemical formulas, lighting, time (Gamma curves), and, experiments. There is a generous bibliography of selections for further reading.

"Accurate and Timely"

by Antoinette Negro

Audio-Visual Materials and Devices, by Ben F. Holland and others. Rodgers, 332 North Ave., Lubbock, Texas. 1958. 157 p.

What this manual is concerned with in particular is expressed by the premise that ". . . verbal instruction is audio-visual instruction." Verbal teaching consists, basically, in selecting and presenting the written and spoken word. The materials of instruction are usually found in books, but the presentation of such materials is made by employing audio-visual devices. The book's main objective, therefore, is to provide information and suggestions concerning audio-visual materials and devices that will enable educators to meet the most important challenges of a successful program.

Administrators, supervisors and teachers will find a wealth of ideas in the special attention given to the construction of various types of devices, to their operation, preparation of materials, and the basic principles of classroom utilization.

Divided into four parts, the first is

concerned with the particulars of teaching with audio materials and equipment such as disc recordings, record players and tape recorders. Part II discusses still projection—namely, opaque and slide projection (both horizontal and overhead) and filmstrip projection. Part III contains a lengthy discussion of teaching with motion projection materials and devices. And Part IV concludes with a brief consideration of providing and maintaining physical facilities for audio-visual teaching.

While avoiding commercial partiality, each section is systematically outlined with comprehensive data pertaining to make-up, construction, operating skills, and advantages and disadvantages of the different devices commonly available to schools. Several outstanding, or at least well known pieces of equipment are presented in each area. After a thorough and scientific analysis of the principles of operation, the technical features of each machine are systematically listed and explained.

In the comprehensive treatment of 16mm film projectors, the mechanical aspects of projectors and films are presented in great detail. This is followed by an explanation of nine different makes of projectors, giving directions for operation, threading, and maintenance. Threading charts for each and tables for determining mechanical specifications are the most helpful aspects of the entire book. However, as with any manual, its value is limited unless the equipment described is available. The non-technical features of this manual increase its scope by giving many practically tested suggestions for use in the classroom.

Written by three audio-visual experts from institutions of higher learning, the text is superior, accurate and timely. It is not as extensive or illustrative as James D. Finn's *Audio-Visual Equipment Manual* but it attempts to be more selective, evaluative, and technical in description. The novice will find this text basic and highly informative. The beginning teacher will come to understand many features of audio-visual equipment unknown to him before. The administrator or supervisor will find innumerable suggestions to think about in selecting equipment and providing physical facilities. The graphs, charts, pictures, and diagrams alone make this book a valuable tool for any audio-visual program or course.

Antoinette Negro is librarian for the Hanover Park Regional High School, Hanover Park, New Jersey.

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Summer School

ARIZONA

Arizona State University (Tempe) — **June 8-July 11**

Audiovisual Aids in Education	John Vergis
Radio and TV in Education	Richard A. Bell
Administration of Audiovisual Aids Programs	Joel Benedict
Curriculum Workshop (Audiovisual Education)	Benedict

University of Arizona (Tucson) — **June 8-July 11**

Radio and TV for Teachers — B. C. Markland

This is a workshop course, carrying upper division and graduate credit, for teachers in or planning to enter the field of educational radio or TV. The University has complete radio and TV facilities, and operates its own ETV station—KUAT. The course will be taught in these studios.

COLORADO

Colorado State College (Greeley) — **June 29-August 21**

Audiovisual Materials in Education — James B. Miles, and Amos L. Claybaugh

Introduces students to most audiovisual materials and devices available for improving instruction; each type is demonstrated, and psychological basis for use is discussed as well as its characteristics, advantages and disadvantages; designed to be of value to all interested in education. (Three classes daily)

Audiovisual exhibits for Grades 7-8-9 on August 20

University of Colorado (Boulder) — **June 29-July 17**

Educational Television in Teaching	Clifford Erickson
AV Methods and Techniques	Erickson
Production of Teacher-Made Materials	Harriet Bick

July 20-August 7

Administration of AV Programs	Robert deKieffer
AV Methods and Techniques	Bick
AV Methods and Techniques (Workshop)	Ruth Moline

University of Denver — **June 15-August 14**

Audiovisual Materials, Equipment and Techniques (five quarter hours)	Harry Kauffman
Audiovisual Program Administration (five quarter hours)	Kauffman
Practicum in Educational Radio and Television (one to five quarter hours)	Kauffman

CONNECTICUT

University of Connecticut (Storrs) — **June 29-August 7**

Audiovisual Materials in Education (three credits)	Carlton W. H. Erickson
Administration of Audiovisual Services (three credits)	Erickson

FLORIDA

Florida A & M University (Tallahassee) — **Beginning June 17**

Production of Inexpensive AV Materials	E. O. Minor
Audiovisual Utilization	T. B. Cooper

Florida A & M University — **June 17-July 7**

ETV Workshop — Cooper

Florida State University (Tallahassee) — **June 15-July 22**

Introduction and Use of Audiovisual Materials	McBride
Production of Nonprojected Materials	Hunt
Selection and Evaluation of Audiovisual Materials	McBride

June 15-August 8

Introduction and Use of Audiovisual Materials	Quinly and Mabee
Production of Nonprojected Materials	Hunt and Mabee

ETV Workshop (dates to be announced)

GEORGIA

University of Georgia (Athens) — **June 15-July 3**

Workshop—Educational Television — G. E. Oliver

June 15-July 22

Utilization of AV Materials — Staff

July 6-July 22

Utilization of AV Materials in Trade and Industrial Education — G. E. Oliver

July 27-August 19

Utilization of AV Materials — G. E. Oliver

HAWAII

University of Hawaii (Honolulu) — **June 21-August 1**

Audiovisual Education — W. A. Wittich (lecturer) Richard L. Sanner (laboratory)

ILLINOIS

Chicago Teachers College (Chicago) — **June 29-August 21**

Audiovisual Education — Instructor to be announced

Eastern Illinois University (Charleston) — **June 15-July 3**

Workshop for Coordinators in Audiovisual Education — Verne Stockman and Staff

June 15-August 7

Preparation and Use of Instructional Materials — Stockman and Staff

Illinois State Normal University (Normal) — **Dates to be announced**

Audiovisual Clinic (one credit, undergraduate)	M. L. Miller
Audiovisual Program of the School (three credits, graduate)	M. L. Miller
Audiovisual Education (two sections) (two credits)	C. Kurth
Special Projects—Music (two credits)	L. Isted

Northwestern University (Evanston) June 22-August 1

Audiovisual Teaching Materials in the Classroom (graduate course carrying three-hour credit) — C. R. Crakes

(This makes the 16th year on Northwestern's summer campus for Mr. Crakes who is educational consultant for DeVry Technical Institute.)

INDIANA

Indiana University (Bloomington)

Intersession May 26-June 10

Utilization of AV Materials	Fred Williams
Preparation of Inexpensive Instructional Materials (2 sections)	William Prigge, Robert Brown

Summer Session June 10-August 7

Utilization of AV Materials (2 sections)	John Moldstad, Robert Hunyard
Preparation of Inexpensive Instructional Materials (4 sections)	Ted Cobun Prigge, Harvey Frye (2)
Organization and Curricular Integration of AV Materials	Carolyn Guss Robert Hunyard
Production Techniques (2 sections)	Warren Stevens, Ledford Carter, George Vuke, Beryl Blain, C. M. Flaten, Merlyn Herrick
Survey of AV Communications	James Knowlton
AV Communications in Formal Education	John Moldstad Gene Faris
Production II	Malcolm Fleming, Dennis Pett, George Siddons
Research in AV Materials, Radio or Television Education	Staff
Master's Thesis in AV Materials, Radio or Television Education	Staff
Research and Theory in AV Communications	Knowlton, Henry Bern, Stevens
Administration of AV Communications Programs	L. C. Larson, K. C. Rugg
Research Methods in AV Education	Knowlton, Bern, Guss
Seminar in AV Communications I	Bern and Staff
Doctor's Thesis in AV Materials, Radio, or Television Education	Staff
Workshop in AV Communications (June 22-26)	Staff

Post Session August 7-22

Utilization of AV Materials	Staff
Preparation of Inexpensive Instructional Materials (2 sections)	Staff

State Teachers College (Terre Haute) June 15-July 17

Audiovisual Education	Howard Gillaspie
Administration of Audiovisual Education	Russel McDougal
Workshop in Audiovisual Education	V. L. Tatlock
Preparation and Production of Audiovisual Materials	Gillaspie
*Preparation of Audiovisual Materials for Science	McDougal

July 20-August 21

Advanced Audiovisual Production	Gillaspie
Selection and Utilization of Audiovisual Materials	McDougal
Audiovisual Education	Gillaspie
*Production of Audiovisual Materials for Science	McDougal

*National Defense Education Class

IOWA

State University of Iowa (Iowa City) June 17-August 12

Audiovisual Teaching Materials	Kenneth Berry and John P. Kelly
Audiovisual Production Techniques	Kelly
Advanced Audiovisual Problems: Administration	J. B. Stroud Lee W. Cochran
Speech in Television	H. Clay Harshbarger and Sam Becker
Cinematography Techniques	John Kuiper
Television Workshop	Staff
Seminar: Experimental Research in Communications	Paul Heinberg, Sam Becker
Problems in Television, Film, and Radio	Staff
Master's Thesis in Television, Film, and Radio	Staff
Research in Television, Film, and Radio	Staff

KANSAS

Kansas State Teachers College (Emporia) June 2-July 12

Use of Audiovisual Materials	Rolland Alterman
Administration of Audiovisual Services	Alterman
Audiovisual Laboratory	Alterman
Research Methods in Audiovisual	Alterman

July 14-August 2

Use of Audiovisual Materials	Alterman
Audiovisual Laboratory	Alterman
Research Methods in Audiovisual	Alterman

August 4-August 16

Workshop in Audiovisual Materials	Alterman

MASSACHUSETTS

University of Massachusetts (Amherst) June 22-July 28

Preparation and Use of Audiovisual Aids (three credits)	Ray Wyman
Teaching with Television and Radio (three credits)	Wyman

MICHIGAN

Michigan State University (East Lansing)

AUDIOVISUAL SECTION June 24-July 30

Audiovisual Instruction I	James Page
Audiovisual Instruction I	Staff
Audiovisual Instruction I	Staff
Materials and Methods of Audiovisual Instruction I	Don Brumbaugh
Graphic Interpretation in Audiovisual Instruction II	Wil Veenendaal
Local Production of Audiovisual Materials	James Page
The Administration of Audiovisual Materials	Don Brumbaugh
Graduate Problems in Education	Charles Schuller

July 31-September 4

Materials and Methods of Audiovisual Instruction I	Horace Hartsell

RADIO AND TELEVISION SECTION June 22-July 3

Foundations of Broadcasting	Smith
Fundamentals of Broadcasting I	Weld
Radio and TV Announcing	Smith
High School Radio and TV Workshop	Gray
TV Directing	Staff
TV Program Development	C. Lewis
Radio and TV in Education	Gray
Special Problems	Staff

(Continued on the next page)

Evaluation and Criticism in Broadcasting and Film — Weld
Special Problems — Vardac

July 6-July 17

Television Production — C. Lewis
Broadcasting, Film, and the Public — C. Lewis
International Broadcasting — Emery
Special Problems (two sections) — Staff

Wayne State University (Detroit) — **June 22-July 31**

Audiovisual Methods and Materials (two semester hours credit) (five sections) — Robert Kilbourn, J. J. McPherson, Donald Smith, Aldo Bonura, and Lewis Saks
Audiovisual Methods and Materials (Advanced) (two hours credit) — Kilbourn
Preparation of Audiovisual Instructional Materials (two hours credit) — Saks

June 22-July 3 and August 3-14 (two-week workshops, two-hour credits)

Application of Audiovisual Techniques for Teaching Foreign Languages — Emma Birkmaier

August 3-14 (two-week workshops)

Audiovisual Methods and Materials (two hours credit) — Kilbourn
The Museum in Education (two hours credit) — Henry Brown
Preparation of Audiovisual Instructional Materials (two hours credit) — McPherson and Hazel Thompson
Production of Audiovisual Instructional Materials—Independent Projects (one to three hours credit) — McPherson

Western Michigan University School of Graduate Studies (Kalamazoo) — **June 22-July 31**

Audiovisual Education — Carl Snow
Workshop in Radio — Robert Dye

August 3-14

Production of Instructional Materials — Snow

University of Michigan (Ann Arbor) — **(Dates to be announced)**

Seminar: Audiovisual Methods and Materials — Lemler
Audiovisual Methods and Materials (Four sections) — G. Jones (2), Hansen, and Moore

MINNESOTA

University of Minnesota (Minneapolis) — **June 15-July 18**

Audiovisual Materials in Education — Pearson
Audiovisual Materials and Equipment Laboratory — Pearson
Problems in Audiovisual Education — Pearson
Radio and Television Speech — Barer

July 20-August 22

Audiovisual Materials in Education — Pearson
Problems in Audiovisual Education — Pearson
Co-ordinating an Audiovisual Education Program — Pearson

MISSOURI

University of Kansas City — **June 8-19**

Radio-TV Education: Objectives and Issues — I. Keith Tyler

June 22-July 17

Radio-TV Education: Planning and Programming; Materials and Methods — Tyler

NEW MEXICO

New Mexico Highlands University (Las Vegas) — **June 10-August 20**

AV Techniques — Cline

NEW YORK CITY

Columbia University Teachers College — **July 6-August 14**

Instructional Materials: Sources, Selection, and Use — Witt
Audiovisual Materials and Methods of Use — Witt
Laboratory Course in Audiovisual Instruction (Special Fee) — Levene and Daly
Operating AV Equipment July 6-17
Using the Camera in Education July 20-31
Producing Graphic Materials August 3-14
Using Television, Radio, and Recordings in Education — Brunstetter
Production of Educational Motion Pictures (Special Fee) — Bohmer
Preparation and Production of Educational Television Programs (Special Fee) — Yanowski

New York University — **July 6-August 14**

Instructional Materials and the Modern Classroom — James W. Brown
Mass Communications in American Life — George Gordon

June 22-July 31

Summer Workshop in Television and Radio (in cooperation with the Division of General Education)

NEW YORK STATE

The University of Buffalo — **June 29-August 7**

Audiovisual Methods in Education — Friedrich Febel

Cornell University (Ithaca) — **July 6-August 14**

Audiovisual Methods in Teaching — E. L. Phillips

State University Teachers College at Buffalo — **June 29-August 7**

Audiovisual Education (graduate and undergraduate credit) — Herman Trubov

State University Teachers College at Cortland — **June 29-August 7**

Audiovisual Education (two sections) — John Shaffer

State University Teachers College at Oswego — **June 29-August 7**

Audiovisual Methods and Materials — Fred Maxon

NORTH CAROLINA

North Carolina College (Durham) — **June 8-August 1**

Audiovisual Methods and Materials — Norman C. Johnson
Photography for Teaching — James E. Parker

June 8-July 11

Audiovisual Workshop — Parker, Johnson, Christopher M. Reynolds, and guest consultants

Appalachian State Teachers College (Boone) — **June 10-July 17**

Audiovisual Aids in Education — Leland Cooper
Utilization and Preparation — John A. Pritchett, Jr.

July 6-17

Audiovisual Workshop — Barry Morris

July 20-August 21

Audiovisual Aids in Education — Leland Cooper
Utilization and Preparation — Pritchett
Administration of AV Materials — Pritchett

Agricultural and Technical College (Greensboro) — **June 8-26 and June 29-July 17**

Audiovisual Aids Workshop — Ralph L. Wooden

Summer School

NORTH DAKOTA

University of North Dakota (Grand Forks) — **June 15-August 8**

Audiovisual Materials and Equipment	I. S. Spigle
Preparation of Audiovisual Materials	Spigle
Television Production	S. Bryce

OHIO

The Ohio State University (Columbus) — **June 18-July 23**

Audiovisual Materials of Instruction	Williams and Gibbony
Broadcast Programs and Audiences	Summers
Radio and TV Program Planning	Summers

July 24-August 30

Writing for Radio and TV	Mall
TV Production and Directing	Mall

Kent State University (Kent) — **June 22-July 25**

Audiovisual Materials in Education	Wenger
Techniques in Broadcasting	Clarke
The Radio and TV Audience	Clarke

July 27-August 29

Organization and Administration of Audiovisual Programs	Wenger
Broadcasting Internship	Weiser
Graphic Arts, Teaching Aids, Public Relations	Bentley

Western Reserve University (Cleveland) — **June 22-July 31**

Laboratory in Audiovisual Instruction	John Borza, Jr.
Radio and Television Programming and Audience Analysis	Robert H. Stewart

OKLAHOMA

Oklahoma State University (Stillwater) — **June 1-August 1**

Audiovisual Education Workshop (2 semester hours)	L. M. Hohstadt
Administration and Supervision of Audiovisual Materials (2 semester hours)	J. C. Fitzgerald

July 20-24

Audiovisual Education Workshop (1 semester hour)	Guy M. Pritchard

University of Oklahoma (Norman) — **June 2-July 30**

Audiovisual Materials in Teaching	W. R. Fulton
Organization and Coordination of Audiovisual Activities	W. R. Fulton

OREGON

University of Portland — **June 22-August 8**

Audiovisual Methods and Materials	Mrs. Emmons

PENNSYLVANIA

University of Pennsylvania (Philadelphia) — **June 29-August 7**

Visual and Sensory Techniques	Richard Heisler

TENNESSEE

Middle Tennessee State College (Murfreesboro) — **July 11-August 21**

Materials and Methods in AV	Bealer Smotherman
Teaching Aids including AV	Smotherman

University of Tennessee (Knoxville) — **June 15-July 21**

Audiovisual Aids to Teaching	Chlora C. Dunn

TEXAS

East Texas State College (Commerce) — **June 3-July 10 and July 15-August 21**

Audiovisual Aids to Instruction	Beatrice Murphy
Utilization of AV Materials	Murphy
Audiovisual Methods in Teaching (three sections for both terms)	Murphy, Quincy L. Atha, and Robert L. Titus
Preparation of AV Materials (two sections the first term)	Titus
Administration of an AV Program	Atha
Television in Education	Staff

Hardin-Simmons University (Abilene) — **July 15-August 21**

Audiovisual Aids in the Secondary School	R. A. Collins
Audiovisual Aids in the Elementary School	Collins

Prairie View A & M College (Prairie View) — **June 8-July 19**

Utilization of AV Materials	Marion Henry
Laboratory in AV Materials	Henry

July 20-August 29

Utilization of AV Materials	Henry
Preparation of Graphic Materials	Henry

The University of Texas (Austin) — **June 16-August 19**

Selection and Utilization of AV Materials	B. F. Holland
Production of Audiovisual Aids	Holland
Research (Conference)	Holland
Thesis (Conference)	Holland

VIRGINIA

Virginia State College (Petersburg) — **June 15-July 3**

Audiovisual Materials of Instruction (three semester hours)	E. T. Tucker

July 6-August 14

Audiovisual Materials of Instruction (three semester hours)	Tucker
Organization, Supervision, and Administration of AV Materials (graduate—three semester hours)	S. A. Madden

WASHINGTON

Central Washington College of Education (Ellensburg) — **June 23-July 22**

Instructional Aids: Classroom Utilization	Virginia Goldsmith
Instructional Aids: Local Production	Goldsmith
Introduction to Radio and TV Broadcasting	Robert Slingland
Radio-Television Studio Operations	Slingland

July 6-16

ETV Radio and TV Workshop	Slingland

July 23-August 21

Instructional Aids: Classroom Utilization	Richard L. Hawk
Instructional Aids: Local Production	Hawk
Introduction to Radio and TV Broadcasting	Slingland
Elementary Radio and TV Production	Slingland

(Continued on the next page)

Western Washington College of Education (Bellingham) — June 22-July 31

Audiovisual Instruction (three sections)	David McDonald, Willard Brown (2)
Administration of the AV Program	McDonald

July 31-August 21

ETV Workshop	Paul Herbold

University of Washington (Seattle) — June 22-July 22

Laboratory Work on KUOW	Edwin H. Adams
Television Programming	Harold F. Niven, Jr.
Television in the Schools	Adams
Television Production	Niven
Television Workshop Laboratory	Niven
Radio-TV Speech	Winfred W. Bird

July 23-August 21

Auditory and Visual Aids in Teaching	Alice H. Hayden
Survey of Radio and TV	Adams
Radio Production	Niven
Laboratory Work on KUOW	Adams
TV Staging and Graphics	Niven
Television Workshop Laboratory	Niven
Advanced Radio-TV Speech	Bird

WEST VIRGINIA

West Virginia University (Morgantown) — June 8-July 17

Audiovisual Resources for Instruction (two-hour credit)	C. A. Ault
Organizing Programs of AV Instruction (two-hour credit)	Ault
Problems in AV Instruction (one to three-hour credit)	H. B. Allen
Practicum in AV Education (one to four-hour credit)	Allen

West Virginia University — July 20-August 26

Audiovisual Resources for Instruction (two-hour credit)	Allen
Production of AV Resources (two-hour credit)	Allen
Principles of Communication (two-hour credit)	Allen
Problems in AV Instruction (one to three-hour credit)	Staff
Practicum in AV Education (one to four-hour credit)	Staff

WISCONSIN

Stout State College (Menomonie) — June 22-July 31

Audiovisual Education (graduate and undergraduate)	David P. Barnard
Audiovisual Administration (graduate only)	Barnard
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Technical Problems in Audiovisual Education (graduate only)	Barnard

(All courses are two semester hours)

University of Wisconsin (Madison) — June 22-August 14

Methods in AV Instruction (elementary teachers)	F. A. White
Methods in AV Instruction (secondary teachers)	H. P. Zimmerman
Local Production of AV Materials	R. D. Hubbard

July 20-August 14

Methods in AV Instruction (elementary)	Earl Strohbehn
Methods in AV Instruction (secondary)	Strohbehn

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Instruction Conference

Dr. Hyer reports a number of stimulating presentations at the Regional Conference on Instruction sponsored in Oklahoma City February 25-28 by the NEA in cooperation with state and local educational groups. "Focus on Quality Teaching of All Children" was the theme which attracted conferees from Arkansas, Kansas, Missouri, Oklahoma, and Texas. The meeting revolved around small group discussions and laboratories, one of which was "Using Tools of the Trade," organized by the DAVI members present. Among them, besides Dr. Hyer, were Theo Yarborough, Clifford Costley, and William Fulton.

Notable presentations and commentary reported by Dr. Hyer were those by:

- Laura Zirbes, professor emeritus, Ohio State University, who held the audience spellbound with a series of case studies which added up to a portrayal of the quality teacher.
- H. Gerthon Morgan of the Institute of Child Study, University of Maryland, whose topic was the role of learning in quality education. Dr. Morgan emphasized that the story of education is the story of interacting. His most challenging statement: "Teachers cannot teach. They cannot teach anything to another person. Each person must teach himself. The role of the teacher is to be a facilitator of the learner's learning."
- George D. Spindler, associate professor of education and anthropology at Stanford, who spoke on cultural changes that will increasingly effect changes in education. Dr. Spindler commented that "leisure time is emerging as a major problem for the average man and as a challenge for education. He also spoke with concern about the enormous population growth which is transforming our society from a rural way of life into a super-urban environment requiring cooperation and conformity rather than individualism.

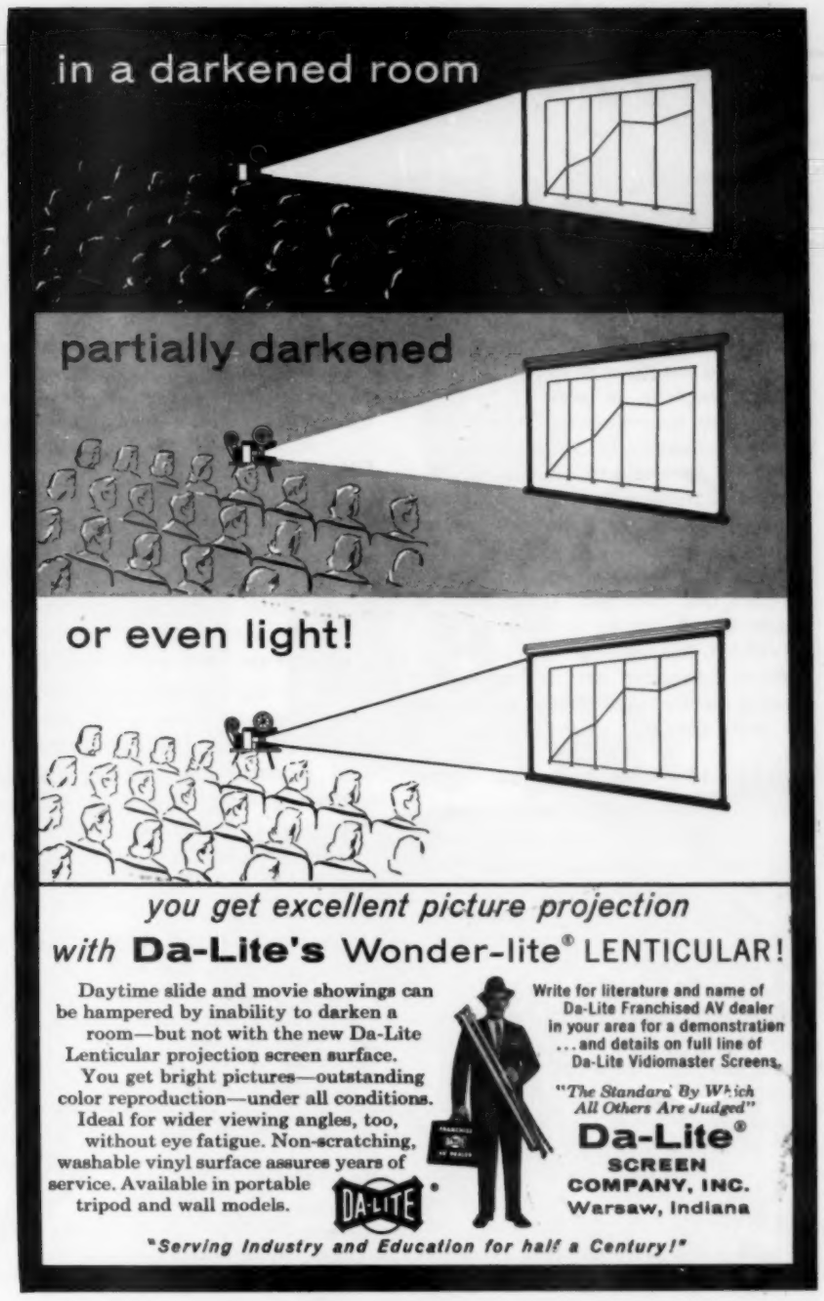
New Emphasis at AACTE

Increased interest in classroom instruction was a noticeable trend at the 11th annual meeting of the American Association of Colleges for Teacher Education February 12-14, according to Dr. Hyer who was among DAVI members present. Other members at the Chicago meeting were A. W. VanderMeer, W. R. Fulton, W. C. Meierhenry, and Phil Lewis. Dr. Hyer and Dr. Fulton represented DAVI at the meeting of the Coordinating Committee on Collegiate Problems of Teacher Education which preceded the conference.

Keynoting the interest in college instruction was H. Taylor Morse, dean of the General College of the University of Minnesota, who commented:

"A teacher seeking greater effectiveness will use imagination and resourcefulness. . . . He should be aware of the rich resources of audiovisual aids available for instruction in almost any field of study. These are not a substitute for teaching, but rather an aid to teaching, a different dimension, a change of pace, often an effective variation in pattern of procedure.

Dr. Hyer, who also attended concurrent sessions of the National Society of College Teachers of Education, reports a growing emphasis on research vis-a-vis teaching as opposed to previous research emphasis on the learner. Some of the teaching variables suggested for research were: teaching methods, teaching materials and tools, teacher personality, and non-behavioral characteristics and their effect on teaching. Research on the whole was stressed more than usual throughout this conference, Dr. Hyer said, with basic research given prominence over solving practical problems.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For Your Information

A Report on the National Defense Education Act

by Anna L. Hyer

"THE Defense Education Act has brought about some re-thinking of numerous aspects of educational programs at all levels. New issues are being raised; new possibilities explored; old practices re-examined; and nearly everyone is seeking to find out how his program can share in the proceeds—financially and otherwise."

Almost by accident, I quoted this statement from the January 27 issue of *Reel News* (State College of Washington) to a member of Congressman Elliott's staff and learned that this is exactly the reaction Congressman Elliott hoped for as a result of his bill which has become the National Defense Education Act. His office requested additional copies of the issue for their files.

Title III—14 Plans Approved

As of March 3, state plans under Title III have been approved for these 14 states: Louisiana, Oklahoma, North Carolina, Montana, Maryland, Indiana, Florida, Pennsylvania, Texas, Georgia, California, Alabama, Kentucky, and Oregon.

The DAVI office has received a sizable number of requests for help in determining the quantity and quality of audiovisual materials and equipment to be incorporated into local projects in these states. In response we have developed some tentative mimeographed materials which we hope to follow with more comprehensive ones. Those of you who have thought through these questions in your own schools can contribute, if you have developed guides, by supplying the national office with copies.

Title VII—Pilot Projects

A list of the research projects approved for grants by the Advisory Committee at its March 5-6 meeting will be published in the May issue of AUDIOVISUAL INSTRUCTION. April 1 was the deadline for projects to be considered at the May 10-11 meeting.

The DAVI national staff, in cooperation with the staff of ASCD, has contracted with the Department of Health, Education, and Welfare for conducting regional conference and follow-up workshops concerned with the educational uses of the new media. These activities will take place this fall and summer. The contract is one of six pilot projects approved by the Advisory Committee at its first meeting. It is hoped that these projects will bring into sharp focus some of the major dissemination problems that tend to block the development of signficant programs for educational utilization of new media.

Title X—Section 1009

State AV organizations should be working with their state departments of education to improve the adequacy of statistics in the audiovisual area. Section 1009 of Title X provides federal grants to states on a matching basis "for the purpose of assisting the States to improve and strengthen the adequacy and reliability of educational statistics provided by State and local reports and records and the methods and techniques for collecting and processing educational data and disseminating information about the condition and progress of education in the States."

President-Elect Walter Bell has assumed leadership for DAVI in developing a guide for states to use in the collection of AV information. If these guides are used by our members, other state groups may be encouraged to collect similar types of information enabling the U. S. Office of Education to compile more adequate statistics than has formerly been possible. We hope that your state organization will back this DAVI project. Copies of materials sent from DAVI headquarters to state superintendents of education will be forwarded to presidents of AV organizations.

New Guide

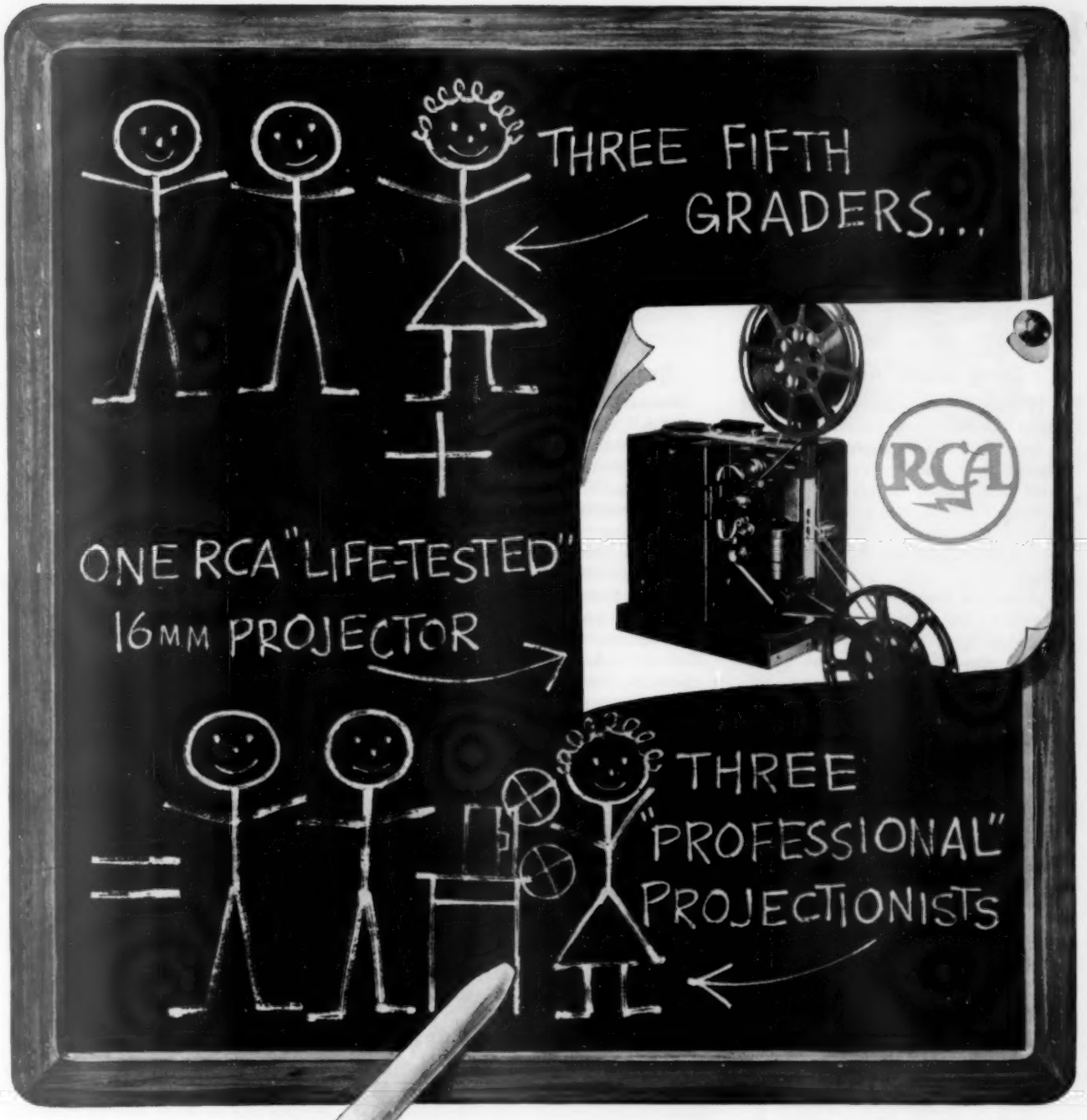
Guide to the National Defense Education Act of 1958 is now available for 30 cents from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. This 32-page booklet discusses the Act as a whole, then each title individually, giving the "why" of the title, its goals, appropriations, how it is to be administered, etc., and answering the most commonly asked questions relative to its operation. Also included is a chronology of the consultative conferences held from September through December last year.

*Boxscore as of February 1, 1959

(Eight of nine major programs now in operation)

Funds appropriated and proposed for 1959	$115,000,000
Amount requested in the budget for 1960	$150,000,000
Institutes for guidance	Authorized at 8 colleges and universities
Institutes for foreign languages	First one June 22, University of Colorado (about 100 highschool teachers). Others at the Universities of Maine, Michigan, and Louisiana State
Guidance, counselling and testing	State plans approved for Florida, Oklahoma, and Texas
Science, math, and foreign languages	Fourteen state plans approved as of March 4, see above
Area vocational programs	Forty state plans approved and money allocated
Use of new media	Six pilot programs approved
Improvement of statistical services	Funds allocated to 6 states
Student loans	$6,000,000 allocated (est. 6667 loans)
Graduate fellowships	160
Graduate fellowships advisory committee	Members named January 16
Loans to private schools for science, math, and languages	Regulations mailed to 16,000 institutions

* From *Ed Press News Letter*, February 6



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NEWS NOTES from the field

Long Island Activities

AVISO, the newsletter of the Long Island Audio-Visual Council, reports an inservice course sponsored by the Council now under way at Lindenhurst. The weekly course, coordinated by Fred Lehman, has a faculty of 15 Council members, carries state approved credit, and has 30 teachers enrolled.

Also under the auspices of the Council will be an ETV workshop Saturday, May 2, at the Covert School in South Hempstead. Representatives from education, ETV, commercial TV, newspapers, foundations, and colleges will serve as consultants.

Summer Meeting

The summer meeting of the New York State Audio-Visual Council is scheduled for July 10-11 at the Statler-Hilton Hotel in Buffalo. Olwyn O'Connor, publicity chairman, reports that an interesting agenda is being planned by the committee in charge.

Cooperative Conference

Ernest Tiemann, executive secretary of TEXAVED, has announced plans for the first Cooperative Conference in Instructional Materials to be held at the University of Texas during the week of July 19. Participating organizations are the Texas ASCD, the School Library Division of the Texas Library Association and the Texas State Teachers Association, and TEXAVED. According to Dr. Tiemann, the aim of the conference, which will feature teaching displays and commercial exhibits, is to develop a better concept of what constitutes an adequate program of instructional materials and how it can be established through cooperative efforts of school librarians, AV specialists, and curriculum directors.

DAVI members serving on the program committee are Jack McKay, president of TEXAVED; Jim Hardie, AV director, Galveston; and Dr. Tiemann.

Drawing Cards in Arizona

Edgar Dale was one of three prominent AV figures at the spring conference of the Arizona association meeting at Arizona State University February 13. Dr. Dale who spoke at the dinner meeting chose as his topic, "The Long Look Ahead." Godfrey Elliott of McGraw-Hill keynoted the one-day meeting which featured also three sectional meetings. Don White of NAVA appeared on one of these, interpreting the National Defense Education Act. Two other sessions included a how-to-do-it on the integration of materials in classroom teaching and a roundup of ideas on materials, methods, and new construction facilities. Exhibits were part of the conference.

Iowa Has Two-Fold Concern

Two problems occupying conferees at the spring meeting of the Iowa association in late March were the audiovisual provisions of the National Defense Education Act and pre-service teacher competencies in audiovisual instruction. Ann Hyer gave a report on the former and Lee Cochran reported on last summer's Okoboji Conference which concerned itself with pre-service competencies. Mr. Cochran's report was followed by a panel discussion of what type of pre-service training is desirable for Iowa teachers. Panel members chaired by Guy Wagner of Iowa State Teachers College were Wayland Osborn, Iowa State Department of Public Instruction; James B. Stroud, State University of Iowa; Charles Tyrrell, Dubuque University; and Arnold W. Salisbury, superintendent of schools, Cedar Rapids.

Following these sessions, action committees were appointed to work on each main problem and to report recommendations to general sessions later. Iowa State College at Ames was host.

Internship Program

The College of Education and the bureau of audiovisual instruction of the Extension Division, University of Colorado, have announced an internship program for graduate students in audiovisual methods and techniques. Any doctoral candidate who has been accepted for an advanced degree by the graduate school is eligible. Internship training embraces three phases, namely, course work, work experience, and guided college teaching. It also provides financial assistance.

Work experiences will be provided by the bureau of audiovisual instruction and will include practical on-the-job training. Interns who satisfactorily complete this program in conjunction with other academic work will receive either an Ed. D. or Ph. D. with a minor in audiovisual education. For further information, write Robert E. deKieffer, College of Education, University of Colorado, Boulder.

Fulton Champions Male PTA-ers

W. R. Fulton, recently elected president of the Oklahoma Congress of Parents and Teachers, made the *National Congress Bulletin* with a statement that men are taking more and more active roles in the PTA. Dr. Fulton went on to point out that 39 percent of all Oklahoma PTA-ers are men and that 183 of the approximately 700 units in the state have men presidents. (Dr. Fulton is the third man to be president of the Oklahoma Congress in 36 years.)

Publications In Brief

The Audio-Visual Equipment Directory (Fifth Edition), edited by Henry C. Ruark, Jr., National Audio-Visual Association, Inc., Fairfax, Va. 1959. 242 p., $4.75.

SPECIAL PORTFOLIO on audiovisual media in *Nation's Schools*, February 1959. Thirteen audiovisual articles including one on ETV, one on language laboratories, and one on the impact of the National Defense Education Act by Lawrence G. Derthick. Among other authors are Walter Wittich, Charles Schuller, F. A. White, John Moldstad, Hank Ruark, Robert Hamilton, Donald K. Mereen, Lee E. Campion, and Marjorie Johnston.

"Extending Curriculum Horizons," an AV Supplement to *The Instructor* for January 1959, Irene Cypher, special editor. Contributors are Walter Crewson, Clyde K. Miller, Otis McBride, Albert L. Goldberg, Bruce E. Fleming, C. J. Arnold, Robert Heinich, Ralph H. Hall, Kenneth D. Weber, Elaine D. Afton, Donald W. Smith, and Dr. Cypher.

On the Job in California

Dr. Skelly

Dr. Allen

William H. Allen, AVCR editor, will soon return to his job as adviser on communications for the System Development Corporation at Santa Monica after a three months assignment with the California State Department of Education where his primary task has been to develop a basic policy statement regarding the utilization of educational television in California schools.

Harry J. Skelly, chief of the bureau of audiovisual education of the California State Department, writes that following the completion of Dr. Allen's assignment, Claude W. Haas, AV director for Kern County at Bakersfield, will join his staff as permanent consultant.

Dr. Skelly who replaced Francis Noel as bureau chief last fall, is a native Californian. He was graduated from Chico high school and Chico State College, and later earned his master's degree at Oregon State College and his doctorate in education from Stanford. Besides audiovisual affiliations, he is a member of the NEA, ASCD, and Phi Delta Kappa.

TV Topics

The Educational Television and Radio Center moved its headquarters to New York City in March, locating in the Coliseum Building, 10 Columbus at 58th Street, near midtown Manhattan. The New York offices include those of the president, John F. White, the program department, development, and public relations. The department of business and legal affairs, distribution, and research remain in Ann Arbor under the direction of the vice president, Kenneth L. Yourd. Film distribution now handled at the University of Illinois will be transferred to Ann Arbor.

• • •

Teacher In-Service Education by Television by Donald G. Tarbet is the only pamphlet of its kind, exclusively devoted to the use of television for in-service education of teachers. Published by the school of education at the University of North Carolina, Chapel Hill, the pamphlet does several things: (1) Gives limited reviews of inservice offerings in selected school districts throughout the nation. (2) Suggests the importance of follow-up discussions of inservice telecasts and the need to train discussion leaders. (3) Underlines the universal concern for more demonstration teaching on television. (4) Lists inservice education experiences which teachers feel can best be offered by television. (5) Stresses the importance of developing television as one facet of the total inservice education offered by a school district.

This bulletin could be improved by giving more attention to several areas: (1) The importance of using television to develop basic teaching concepts on a philosophical basis. (2) The delineation of more types of inservice experiences which television can provide. (3) The listing of discussion techniques which might be used after the program. (4) The difficulties and problems involved in having consultants on television, in applying television to problems of teachers in small as well as large schools, and in coping with the problems encountered in using television to demonstrate classroom techniques—HAROLD E. WIGREN

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Dr. Conant Comes to the NEA

A temperate critic

THE COMPREHENSIVE high school is here to stay. So, at least, thinks Dr. Conant who came to the NEA March 9 to be the subject of a TV film while he talked about his report on the American high school and answered questions from a full-capacity audience in NEA's new auditorium. Dr. Carr in his closing remarks counted visitors from the Indian, Danish, and British embassies, the Deputy U.S. Commissioner of Education, and representatives from the American Association for the Advancement of Science.

Dr. Conant's appearance was filmed by Arthur Morris and his crew from "See It Now." An enterprise of the NEA Press and Radio Division, the final product will be a 30-minute film with cut-ins of schools visited by Dr. Conant on the West Coast and in the Midwest. It will be released sometime in May to NEA state associations for distribution to TV stations throughout the country.

Dr. Conant's personal survey of 40 high schools in 18 states as part of a study financed by the Carnegie Corporation was the subject of his remarks at the NEA as well as of his published report *The American High School Today*. Released January 28 and selling for $1 in paperback edition, the Conant report has already been reviewed, editorialized upon, and quoted in journals across the nation. As most reviewers are happy to point out, Dr. Conant does not advocate junking our present public-school system; he does however have several specific suggestions for improving it.

The comprehensive high school in Dr. Conant's view should be "widely comprehensive," impartially accommodating all youth in the community from slow readers to the top 3 percent of the academically talented (the academically talented make up roughly the top 15 percent of students).

This is the type of secondary education that best fits our society, says Dr. Conant, and which most successfully dovetails with our philosophy of higher education.

Minimum Offerings

Few schools visited by Dr. Conant measured up to his concept of a comprehensive high school; many, however, could with minor alterations. The curriculum recommended by Dr. Conant has three phases: one is a general program for all students; a second, vocational education immediately marketable upon graduation; and third, academic courses for students planning to go on to college. The general curriculum for all students comprises four years of English (half of the time to be spent on composition enabling the student to learn self-expression); three or four years of social studies (two of which are history, and one of these, American history); one year of math and one of science. The academically talented would study (all told) four years of math; three years of science; and four years of foreign languages. Lack of the latter, Dr. Conant found, is the most prevalent weakness among comprehensive high schools today. Dr.

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Conant is adamant on the value of foreign languages only if the dosage is sufficient in each language to give the student some mastery of it, namely, to be able to read its literature and converse with a degree of fluency.

Dr. Conant admitted that he was impressed with what he saw in the better vocational programs. The students, he said, were dedicated, and this dedication carried over into their academic studies. He cautioned here also against hodge-podge offerings. The programs should be carefully planned according to the needs of the community so that the student will emerge with a good skill that he can put to immediate use.

At the poles of these two groups—the academic and the vocational—are the highly gifted and the slow readers. These can be taken care of—the gifted, with accelerated courses carrying college credit; the slow readers, in special classes.

The most important remedial step in the improvement of our high schools—and perhaps the toughest to surmount—is, in Dr. Conant's view, school district reorganization. Small high schools, Dr. Conant said baldly, are failing in their contribution to the national effort. Local communities should be made to see that only by consolidating can school districts afford adequate staffs and equipment. Dr. Conant puts the minimum size of the graduating class at 100.

Other points stressed by Dr. Conant were:

- Importance of good counseling. Bright pupils sometimes take the easy course through lack of motivation. Parental pressures and the enticement of immediately marketable skills are also factors that need to be offset.
- Importance of the homeroom. Students need to be part of an unchanging group to give them a sense of community; also to give them a chance to practice democratic procedures.
- No "tracks": Dr. Conant recommended that each student be treated individually. Tracks tend to be inflexible, to split the school along social lines, and to invite the "prestige factor" into play.
- Tuition-free summer sessions: Able students who wish to take electives in art and music besides their full programs sometimes do not find enough hours in the school day. The summer session is a solution for them as well as for slow readers enrolled in a remedial class. Dr. Conant recommends the summer session over the 11-month school year.

BEFORE THE PARADE: This flower-draped model of a projector was one of many floats competing in the annual homecoming parade at East Detroit High School. Photo, courtesy Lew Saks.

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☐ Helpers in Our Community (11 min.) Grades 1-3.
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☐ The Labor Movement: Beginnings and Growth in America (13½ min.) Grades 7-12.
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Is Film our stalemated tool?

Guest Editorial / WESLEY J. F. GRABOW

FOR JUST A FEW MINUTES let us sit down on the old cracker barrel and talk to each other straight from the shoulder, for I'm in a serious frame of mind today and would like to let you in on my concern.

In the last few years, we in the audiovisual field have been watching the tremendous growth of a tool for teaching called television. Many of the true believers have recognized its potential and are incorporating it into their programs, others are standing in awe watching its growth, and still others are fighting it to their final breath. Fortunately our national organization (DAVI) has been doing a vigorous job in promoting the *sane* use of this teaching tool which enjoys such a fabulous reputation in the mass communication area.

Used properly, this instrument has a tremendous potential. One of the things that causes my concern is this: if we in AV do not recognize and add this tool to our repertoire some one else will—and this someone may not be qualified to properly utilize audiovisual tools in the classroom. We must remember that television is just another teaching aid and not a whole new institution; a media of communication, not a cure-all; a friend of AV, and not a foe.

Television is in fact part of AV and a most effective device for teaching.

In Minnesota we are fortunate to be close to a firm such as the 3M company (Minnesota Mining and Manufacturing). Minnesota Mining has been one of the catalysts in the development of the video tape recording technique. The other evening at one of our professional meetings, a research engineer from this firm reported some startling facts about video tape. Within the last two years tremendous developments have taken place. The three networks are removing all kinescope equipment and plan to eliminate use of film entirely in their programming.

As I write this I'm watching out of the corner of my eye on a local television station a video recording of our Winter Carnival parade and it is almost impossible to tell that this is a recording. A large film company which formerly produced Hollywood films and now makes films for television is changing over to straight video recording techniques. Ampex is delivering one video recorder a day. Currently under development are practical editing and splicing techniques for video tape. In fact, the entire television industry would do anything to eliminate the foreign agent, film, from their premises. Their antagonism stems, and justifiably so, from the early hassle with the motion picture industry and also from the fact that a chemical process is foreign to an electronic-geared operation. In fact, TV will for some time use the video tape despite the advantages of film because they *want to*!

The television industry and almost every person working in it think so much of their field and have such a desire for improvement that as a result TV is developing with giant strides. I certainly admire this spirit, and this development is not the cause for my concern.

But I am concerned about the lack of development in the motion-picture film area. The motion picture field continues to move in the horse-and-buggy era while jet-propelled missiles whiz overhead. When has there been a development comparable to that of video tape in the motion picture film or the camera and other projection equipment?

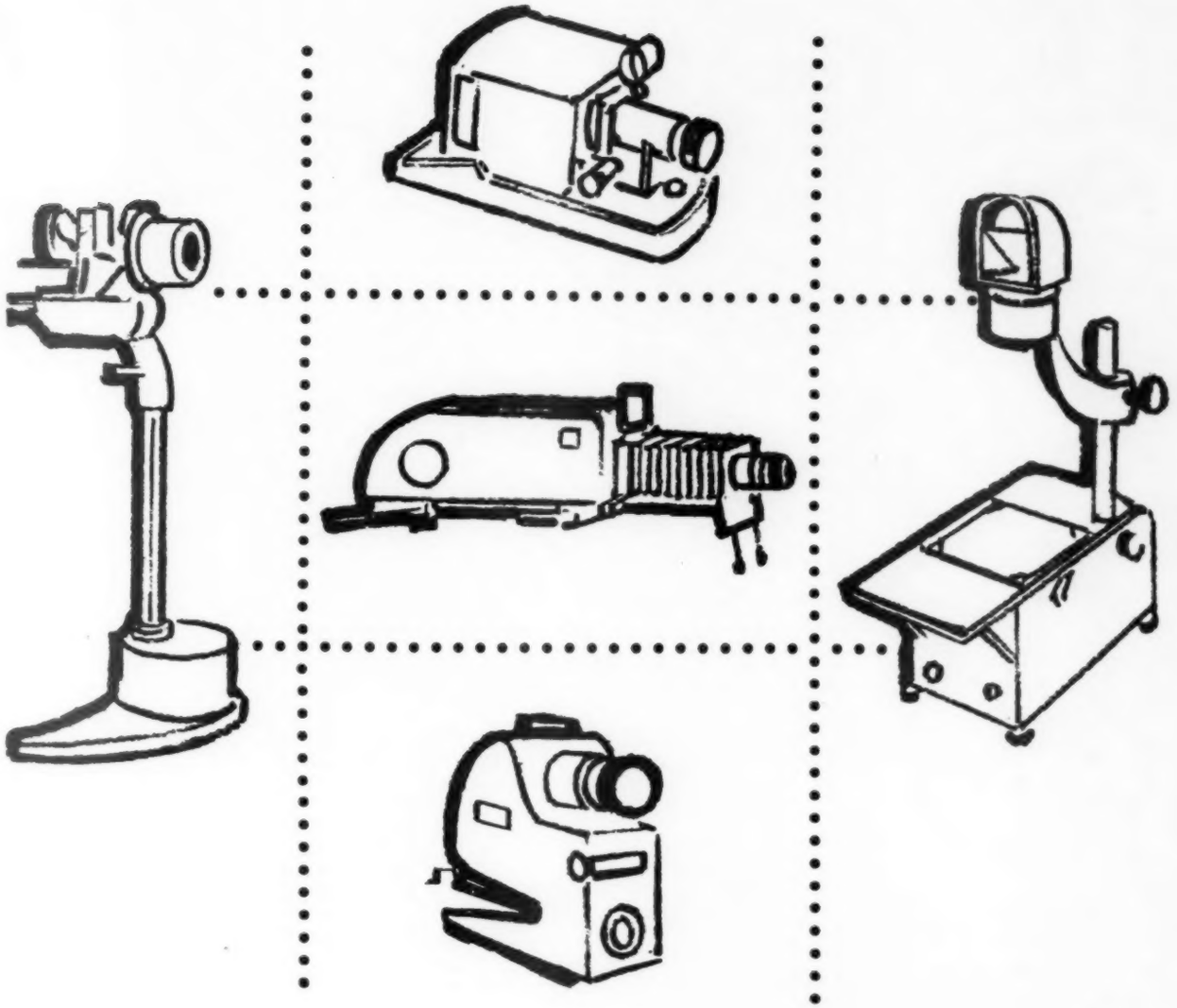
Couldn't a "David Sarnoff" of the motion picture field say: "Within a year I want a simplified sound projector that will sell for under $100 or a sprocketless film that can be projected with friction drive and prismatic optics"—and thereby activate a large powerful research organization to work on these problems.

Where is that new light source that has been coming for the last five years? I understand Europe is now using it in theatrical projection.

Maybe I'm daydreaming but I feel the motion picture film still has room for tremendous development. The film has long been one of our most effective tools in teaching. If one of our key tools and techniques remains in a stalemate it seems to me we should all be sufficiently concerned to encourage, pump-prime, goad, motivate, or otherwise incite those responsible to initiate the research that will bring about the needed technological developments.

The image on celluloid, I believe, still has a vast, untapped potential.

Wes Grabow is audiovisual materials advisor at the University of Minnesota and one of several Minneapolis firebrands in DAVI.



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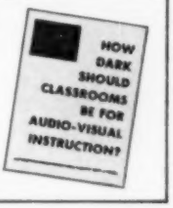

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